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A. Is this facility a publicly owned treatment work	(5)	include a concentrated	y (cither existing or proposed) I enimal fleeding operation or	
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G. Do you or will you inject a this facility any produce	28 29 20	anderground sources o	ect at this facility fluids for spe-	31 32 3
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IV. FACILITY CONTACT	PROBLEM STREET, STREET	Parameter and Section of Section 8, 17 in comme has been updaying		Manager of the Minimum and the said
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C. THIRD (specify)	(specify)	D. FOURTH
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C. STATUS OF OPERATOR (Enter the appropriate letter into the an  F = FEDERAL M = PUBLIC (other than federal or state)	swer box; if "Other", specify.) (specify)	D. PHONE (area code & no.)
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F. CITY OR TOWN	G.STATE H. ZIP CODE	IX, INDIAN LAND
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B. UIC (Underground Injection of Fluids) E. OT	HER (specify)	
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XI. MAP		
Attach to this application a topographic map of the area extending	g to at least one mile beyond proj	perty bounderies. The map must show
the outline of the facility, the location of each of its existing and treatment, storage, or disposal facilities, and each well where it is	d proposed intake and discharge :	structures, each of its hazardous waste
water bodies in the map area. See instructions for precise requirem	ents.	ie all spinigs, livers and other surface
XII. NATURE OF BUSINESS (PI		
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MANUFACTURE AND SALE OF PAINTS AND	OTHER COATINGS.	
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XIII. CERTIFICATION (see instructions)		
I certify under penalty of law that I have personally examined ar	ed am familiar with the information	in submitted in this application and a
attachments and that, based on my inquiry of those persons in application, I believe that the information is true, accurate and the information including the pomibility of fine and invariant.	mmediatalu reconocible for obtai	ning the information contained in the
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A. NAME & OFFICIAL TITLE (type or print)  B. SIGN	ATURE	C. DATE SIGNED
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C. SPACE FOR ADDITIONAL PROCESS CODES ON FOR DESCRIBING OTHER PROCESSES (code INCLUDE DESIGN CAPACITY.

LEACH PROCESS ENTERED HERE

- IV. DESCRIPTION OF HAZARDOUS WASTES

  A. EPA HAZARDOUS WASTE NUMBER Enter the four—digit number from 40 CFH, Subpart D for each listed hazardous waste you will nancie. If handle hazardous wastes which are not listed in 40 CFR, Subpart D, enter the four-digit number(s) from 40 CFR, Subpart C that describes the characteristics and/or the toxic contaminants of those hazardous wastes.
- B. ESTIMATED ANNUAL QUANTITY For each listed waste entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A estimate the total annual quantity of all the non-listed waste/s/ that will be handled which possess that characteristic or contaminant.
- C. UNIT OF MEASURE For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

METRIC UNIT OF MEASURE CODE ENGLISH UNIT OF MEASURE KILOGRAMS. . . . . . . . 

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

### D. PROCESSES

- 1. PROCESS CODES:
  - For listed hazardous waste: For each listed hazardous waste entered in column A select the code(s) from the list of process codes contained in Item III to indicate how the waste will be stored, treated, and/or disposed of at the facility.
  - For non-listed hazardous wastes: For each characteristic or toxic contaminant entered in column A, select the code/s) from the list of process codes contained in Item III to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed hazardous wastes that possess that characteristic or toxic contaminant,
  - Note: Four spaces are provided for entering process codes, If more are needed: (1) Enter the first three as described above; (2) Enter "000" in the extreme right box of Item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code(s).
- 2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the space provided on the form.
- HAZARDOUS WASTES DESCRIBED BY MORE THAN ONE EPA HAZARDOUS WASTE NUMBER Hazardous wastes that can be described by NOTE more than one EPA Hazardous Waste Number shall be described on the form as follows:
  - 1. Selectione of the EPA Hazardous Waste Numbers and enter it in column A. On the same line complete columns B,C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
  - In column A of the next line enter the other EPA Hazardous Waste Number that can be used to describe the waste. In column D(2) on that line enter "included with above" and make no other entries on that line
  - 3. Repeat step 2 for each other EPA Hazardous Waste Number that can be used to describe the hazardous waste.

EXAMPLE FOR COMPLETING ITEM IV (shown in line numbers X-1, X-2, X-3, and X-4 below) — A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

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EPA Form 3510-3 (6-80)

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IV. DESCRIPTION OF HAZARDOUS WASTES	inned)	TARREST CONTRACTOR	Land William	the training	Land Marie Control
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All existing facilities must include in the space provided of	on page 5 a scale drawing of th	te facility (see instructions to	or more deta	it).	
VI. PHOTOGRAPHS			The region was been part of the first		
All existing facilities must include photographs (ac	erial or ground-level) tha	t clearly delineate all exis	ting struct	ires; existi	ng storage,
treatment and disposal areas; and sites of future st	torage, treatment or dispo	sal areas (see instructions	for more o	detail).	
VII. FACILITY GEOGRAPHIC LOCATION	The state of the s		era englishera in in Praka salah da da da da	7.1	
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VIII. FACILITY OWNER		adalishing separation	No. of the Control of		
A. If the facility owner is also the facility operator	as listed in Section VIII on Fo	orm 1, "General Information	", place an "	'X" in the bo	ox to the left and
skip to Section IX below.		,			
B. If the facility owner is not the facility operator a	u listed in Contine VIII on Es	rm 1 anmolete the followin	a iteme:		
B. If the lacinty dwher is not the facility operator a	s usted in Section Asst on Le	on 1, complete the tollown	ig items.		
1. NAME OF FA	CILITY'S LEGAL OWNER			2. PHONE	NO. (area code & πο
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IX OWNER CERTIFICATION			C. Marie Labora		and the same of th
I certify under penalty of law that I have personal	lly examined and am fami	iliar with the information	submitted	in this and	i all attached
documents, and that based on my inquiry of thos	e individuals immediately	responsible for obtaining	i the intorn	nation, I be	elleve that the
submitted information is true, accurate, and comp including the possibility of fine and imprisonmen		re are significant penaltie.	s for submi	ttilig raise	iniormation,
****				·	
A. NAME (print or type)	B. SIGNATURE	Λ	C.	DATE SIGN	ED
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X, OPERATOR CERTIFICATION				<b>以身体来</b>	
I certify under penalty of law that I have persona					
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E. P. DALY, VICE PRESIDENT

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C. DATE SIGNED NOVEMBER 14, 1980

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II. PI	ROCESSE	S (continued)

C. SPACE FOR ADDITIONAL PROCESS CODES OR Fr. & DESCRIBING OTHER PROCESSES (code "T04"). The EACH PROCESS ENTERED HERE INCLUDE DESIGN CAPACITY.

### IV. DESCRIPTION OF HAZARDOUS WASTES

- A. EPA HAZARDOUS WASTE NUMBER Enter the four—digit number from 40 CFR, Subpart D for each listed hazardous waste you will handle. If you handle hazardous wastes which ere not listed in 40 CFR, Subpart D, enter the four—digit number(s) from 40 CFR, Subpart C that describes the characteristics and/or the toxic contaminants of those hazardous wastes.
- B. ESTIMATED ANNUAL QUANTITY For each listed waste entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A estimate the total annual quantity of ell the non—listed waste/s/ that will be handled which possess that characteristic or contaminant.
- C. UNIT OF MEASURE For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE CODE	METRIC UNIT OF MEASURE CODE
POUNDSP	KILOGRAMSK
TONS	METRIC TONS

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

### D. PROCESSES

1. PROCESS CODES:

For listed hazardous waste: For each listed hazardous wasta antered in column A select the code(s) from the list of process codes contained in Item III to indicate how the waste will be stored, treated, and/or disposed of at the facility.

For non-listed hazardous wastes: For each characteristic or toxic contaminant entered in column A, select the code(s) from the list of process codes contained in Item III to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed hezardous wastes that possess that characteristic or toxic contaminant.

Note: Four spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above; (2) Enter "000" in the extreme right box of Item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code(s).

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the space provided on the form.

NOTE: HAZARDOUS WASTES DESCRIBED BY MORE THAN ONE EPA HAZARDOUS WASTE NUMBER — Hazardous wastes that can be described by more than one EPA Hazardous Waste Number shall be described on the form as follows:

- 1. Select one of the EPA Hazardous Waste Numbers and enter it in column A. On the same lina complete columns B,C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
- In column A of the next line enter the other EPA Hazardous Waste Number that can be used to describe the waste. In column D(2) on that line enter "included with above" and make no other entries on that line.
- 3. Repeat step 2 for each other EPA Hazardous Waste Number that can be used to describe the hazardous weste.

**EXAMPLE FOR COMPLETING ITEM IV** (shown in line numbers X-1, X-2, X-3, and X-4 below) — A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

·		A. EPA		1	C. UNIT		L	D. PROCESSES													
	HAZARD. O WASTENO (enter code)			NO	1	QUANTITY OF WASTE	OF MEA- SURE (enter code)			1. PROCESS CODES (enter)							OD	EŞ			2. PROCESS DESCRIPTION (if a code le not entered in D(1))
X-1	K	0	5	4		900		P	I	' (	2 3	3	D	8	0	1	1		1	1	
X-2	D	0	0	2		400		P	7	' (	0 3	3	D D	8	0	T	T		Т	1	
X-3	D	0	0	1		100		P	7	'(	ئے ' (	3	D	8	0	·1	7			1	
X-4	L	0	0	2						T	1		1	T		1	T		Т	r	included with above

Continued from page 2.  NOTE: Photocopy this page before completing you	u have more than 26 wastes to list.	Form Approved OMB No. 158-S80004
EPA I.D. NUMBER (enter from page 1)	FOR OFFICIAL USE 3N	T/A C \ \ \ \ \ \
W C A D 0 0 5 1 3 0 4 5 5 1		2 DUP
IV. DESCRIPTION OF HAZARDOUS WAST	C.UNIT D.	PROCESSES
WASTENO QUANTITY OF WASTE	(enter code) (enter)	2. PROCESS DESCRIPTION (if a code is not entered in $D(1)$ )
		ransported for Solvent Reclamation
2 K 0 7 9 4,000	T S 0 2 T 0 1	Discharge to POTW
3 K 0 8 1 440	T T 0 1 S 0 4	
4 K 0 8 2 50	T S 0 1 <del>D 8 0</del>	
5 D O O 1 50	T S 0 1 <del>D 8 0</del>	
6 D 0 0 5		ncluded with Above
7 D O O 7		ncluded with Above
8 D O O 8		ncluded with Above
9 0 0 5 50		
1 <u>0</u> D 0 0 7		
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26 23 - 26 27 - 31	35 37 - 20 27 - 20 27 - 29 27 - 29 27 - 29	

EPA Form 3510-3 (6-80)

OF CONTINUE ON PAGE 5

PART A RATING SHEET

FACILITY NAME: The OBrien Corp.

EPA I.D. #: CAPOO5L36455 COUNTY: Q&L SCORE: \_49

PROCESS: 501 502 504 TOL \_\_\_ \_\_\_

SCORE = POINTS X WEIGHTING FACTOR  0 = Non Hazardous 99 = Imminent Hazard	WEIGHTING FACTOR	SCORE
AGE OF FACILITY (YEARS)  0 - 10  11 - 20  21 - 30  over 30   1 pt.  2 pt.  3 pt.  4 pt.	1 × 4	4
PROCESS DESIGN CAPACITY (GAL.)  1 - 1k   1k - 10k   10k - 100k   100k - 500k	2 × 4	8
PROCESS (pick worst case, add 1 point if any additional processes, then multiply by weighing factor)  5 pt landfill (D80)	3 × (4+1)	15
<pre>CHARACTER OF WASTE</pre>	4 X Z	5
LOCATION OF FACILITY  1 pt rural 2 pt. ( urban)	1 ×2	Q
lower hazard higher hazard  1 2 3 4 5	3 X 4	12
RATIONALE FOR BEJ SCORE AND OTHER COMMENTS:  Sinface impoundment appoint to be unlined adjacent to San Francish at Solvent tank shows some possible assion sublems	TOTAL SCORE =  RATER:  DATE:	49 Steenhove 3/19/51

RECORDS SEPARATOR PAGE

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# RECORDS SEPARATOR PAGE

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**RECORDS SEPARATOR PAGE** 



### UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

### **REGION 9**

### 75 Hawthorne Street San Francisco, CA 94105-3901

June 30, 2000

Tim Bishop Genentech 1 DNA Way South San Francisco, CA 94080-4918

Dear Mr. Bishop:

I am writing in response to the question you raised during our telephone conversation of June 21, 2000. You indicated that testing results for soil from a quarry in Brisbane contained arsenic at 15.6 mg/kg. You also mentioned that Cherokee, and their contractors, are considering this soil for backfilling excavations on Genentech property. You asked whether this soil is suitable to use as backfill for your site. In EPA's opinion, it is acceptable.

In our call, you acknowledged that the arsenic levels were below the cleanup levels for the former O'Brien site. However, you were concerned that the soil exceeded EPA's Preliminary Remediation Goals (PRGs). In justifying the cleanup level for the former O'Brien site, in our Final Decision and Reponse to Comments (June 2000), we specifically mentioned that, "EPA believes that the 10<sup>-5</sup> risk level (30 mg/kg for arsenic) is warranted considering (1) the industrial nature of the site, (2) the difficulty in distinguishing between background and site-related arsenic, and (3) the similarly high levels of arsenic that can be found throughout California and San Francisco Bay Peninsula." The naturally high levels of arsenic in California are also discussed in Section 3.2 of the PRGs. Additionally, this section notes that "[a]fter considering background concentrations in a local area, EPA Region 9 has at times used the non-cancer PRG (22 mg/kg) to evaluate sites . . ."

Since some of the soil may be placed in areas where it might be considered sediment rather than soil, I also consulted with the Regional Water Quality Control Board (RWQCB), San Francisco Bay Region. Both Mark Johnson and Michelle Rembaum-Fox, with RWQCB, also considered the soil acceptable for use as backfill for your site.

If you have any questions on this matter, please contact me at (415) 744-2070.

Sincerely,

Tom Kelly

Project Manager, Former O'Brien Site

cc: Mike Bertrand, Cherokee
Michelle Rembaum-Fox, RWQCB
Daisey Lee, DTSC
Mike Bertrand, Cherokee

Michael Harrison, Henshaw Associates John Gibbs, City of South San Francisco cc: Mike Bertrand, Cherokee
Michelle Rembaum-Fox, RWQCB
Daisey Lee, DTSC
Mike Bertrand, Cherokee
Michael Harrison, Henshaw Associates

John Gibbs, City of South San Francisco

### Introduction

The United States Environmental Protection Agency (EPA) is announcing the proposed remedy for soil contamination at The O'Brien Corporation's facility located at 450 East Grand Avenue, South San Francisco, California (see Figure 1).

The 26-acre South San Francisco facility was originally owned by W.P. Fuller and has been used to manufacture paint since 1898. The O'Brien Corporation purchased the facility in 1969. ICI Glidden recently purchased the remaining paint manufacturing operations, an area of approximately 7 acres (see Figure 2). Except for the portion now owned by ICI Glidden (the warehouse and manufacturing building west of the warehouse), all structures have been removed from the facility.

### What is the Problem?

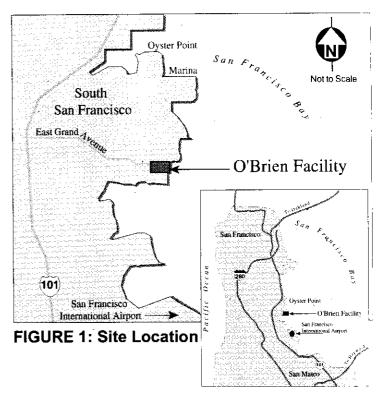
Years of paint manufacturing operations have resulted in lead, arsenic, and semivolatile organic contamination of soils at the site. Of these contaminants.

# **Opportunity for Comment**

**Public Meeting** Thursday, August 26, 1999 Municipal Services Bldg. 33 Arroyo Drive, South San Francisco

**45-Day Public Comment Period** from: July 28 - September 10, 1999

EPA invites you to comment on the proposed remedy either at the Public Meeting or anytime during the Public Comment Period. EPA will not make a final decision on the proposed remedy until after it has considered all public comments. Anyone commenting on the proposed remedy will receive notice of the final decision.



lead is by far the most pervasive in terms of extent of contamination and contaminant concentrations, up to 5.9% in the soil.

The public is not exposed to contamination from the site, because it is fenced. Current workers are not significantly exposed to contamination, since their work is primarily indoors at the portion of the site that is currently paved. Nonetheless, if left unaddressed, the contamination could pose a risk to future workers at the site, primarily through long-term ingestion and inhalation of contaminated soil or dust at the site.

# **Proposed Soil Remedy**

Two different remedies are being proposed for different portions of the site. For the warehouse and the area around it, the proposed remedy consists of capping the area. The cap consists of asphalt paving around the warehouse and administrative building as well as the buildings themselves and the concrete foundation of the tank storage area. The majority of the paving al-

Continued on page 2



### **Proposed Soil Remedy**

Continued from page 1

ready exists at the site, only a small strip of asphalt must be added along the northern side of the warehouse to complete it. The cap will eliminate future human and ecological exposure to contaminated soil.

For the capped portion of the property, O'Brien or ICI Glidden must submit institutional controls (deed restrictions) that accomplish the following objectives:

- ensure that the area remains covered by asphalt or concrete
- restrict the future use of the property to commercial and industrial use, unless other uses are approved by EPA or the California Department of Toxic Substances Control (DTSC)
- minimize excavations in the capped area
- if excavations are necessary, notify EPA or DTSC at least 14 days in advance of any planned activities and explain how contaminated soils will be managed
- characterize any soil excavated beneath the cap, but not replaced in the original excavation, to determine if RCRA requirements apply to handling and disposal of the soil
- existing buildings may be demolished and new buildings may be constructed, provided that the area remains capped after construction is complete and that soils are properly managed during construction or demolition activities

The institutional controls must remain in effect for-

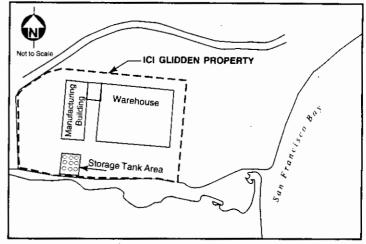


FIGURE 2: ICI Glidden Property

ever, unless U.S. EPA or DTSC agrees that no further remediation is necessary.

For the remainder of the site, the proposed remedy consists of (1) excavating contaminated soil (shown in **Figure 3**) that exceeds U.S. EPA's soil cleanup standards (see **Table 1**); (2) treating soils containing primarily lead or arsenic contamination by the addition of lime, modified phosphates, or silicates so the lead or arsenic are no longer mobile in the environment, or transporting the contaminated soil off site to a RCRA-permitted treatment and disposal facility; (3) transporting soils with volatile or semivolatile organic contamination off site to a permitted treatment and disposal facility; and (4) backfilling excavated areas with clean soil.

Based on limited data, O'Brien estimated that it will excavate 3,500 cubic yards of contaminated soil. As part of the remedy, O'Brien must submit a plan to complete the characterization of the extent and depth

Contaminant	EPA Soil Cleanup Concentration	Highest Concentration at the Site
arsenic	30 mg/kg*	60 mg/kg
lead	1,000 mg/kg	59,000 mg/kg
benzo(a)anthracene	3.6 mg/kg	8.4 mg/kg
benzo(b)fluoranthene	3.6 mg/kg	11 mg/kg

TABLE 1: U.S. EPA's Soil Cleanup Standards

<sup>\*</sup> mg/kg (milligram per kilogram)



of contamination shown in **Figure 3**. After treating the contaminated soil, O'Brien will collect confirmation samples to verify that treated soil is no longer a hazardous waste.

# **Other Cleanup Activities**

The site previously operated a number of RCRA-regulated units, including a hazardous waste storage area, two hazardous waste storage tanks and three hazardous waste surface impoundments. DTSC approved the certification of closure (the last step in the closure process) on July 18, 1988 for the surface impoundments and tanks. In May 1994, DTSC approved the closure of the hazardous waste storage area.

# **History**

U.S. EPA's Corrective Action Order, issued on April 16, 1991, required O'Brien to undertake immediate action, in the form of an interim measure, to clean up contamination at the breakwater. The breakwater

was constructed in the 1910s, presumably to protect the fill along the southern edge of the site. U.S. EPA approved O'Brien's plan on December 24, 1991. O'Brien removed the breakwater from March 1992 to May 1992. Figure 3 shows the location of the breakwater, the surface impoundments, the tanks, and the hazardous waste storage area relative to the other areas addressed as part of the current proposed remedy.

### What's Next?

O'Brien is continuing to collect data to determine the impacts of soil contamination on the groundwater. When U.S. EPA reaches a conclusion on the extent of groundwater contamination and an appropriate remediation alternative, if any, U.S. EPA will again provide notice to the public of its proposed decision. At a minimum, this proposal will include continued monitoring of groundwater downgradient (downslope) of capped soil contamination in and near the warehouse.

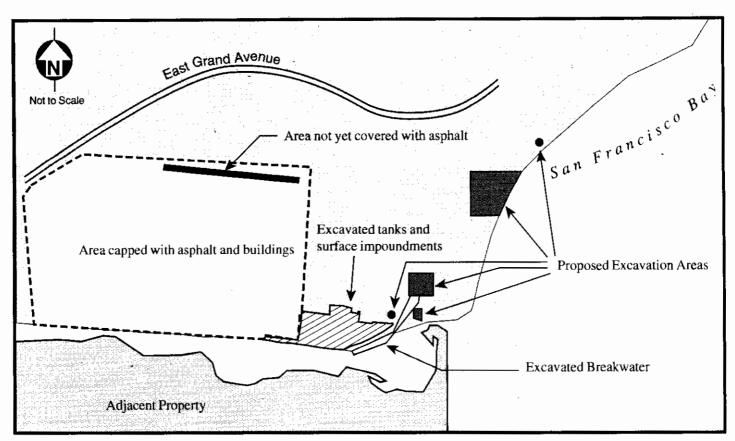


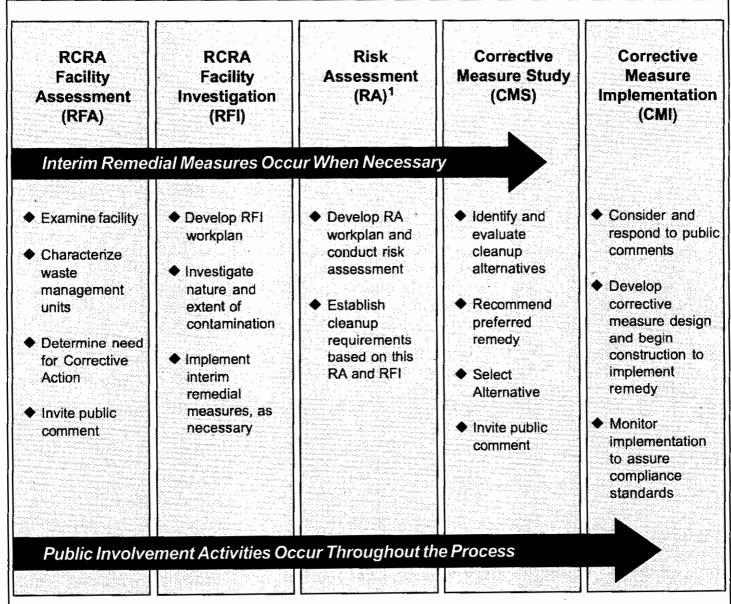
FIGURE 3: Location of proposed and previously completed corrective measures



# **RCRA's Corrective Action Program**

The RCRA Program is responsible for implementing the Resource Conservation and Recovery Act of 1976 and the Hazardous and Solid Waste Amendments of 1984, which regulate 1) generators and transporters of hazardous waste and 2) hazardous waste treatment, storage and disposal facilities.

The Corrective Action Program is the part of the RCRA Program that requires site-wide investigation and cleanup at RCRA treatment, storage and disposal facilities, such as The O'Brien Corporation facility. The flow chart below illustrates the RCRA corrective action process of facility investigation and cleanup selection and implementation.



<sup>1</sup>U.S. EPA is proposing to use the U.S. EPA Region 9 Preliminary Remediation Goals as a cleanup level rather than conducting a site specific Risk Assessment.

### For More Information

For technical information about the site, including the Statement of Basis, which explains the rationale for the proposed remedy, contact: Thomas P. Kelly, Project Manager, U.S. EPA, 75 Hawthorne Street (WST-5), San Francisco, CA 94105-3901, phone: 415-744-2070, e-mail: kelly.thomas@epamail.epa.gov.

For additional fact sheets or general information on the RCRA Corrective Action process, contact: Vicky M. Semones, Community Involvement Coordinator, U.S. EPA, 75 Hawthorne Street (SFD-3), San Francisco, CA 94105-3901, phone: 415-744-2422, email: semones.vicky@epamail.epa.gov.

To review the U.S. EPA's Administrative Record and site documents that support this proposed remedy, you may schedule a visit to the RCRA Records Center, U.S. EPA, 75 Hawthorne Street, 7th Floor, San Francisco, CA, by calling Vern Christianson at 415-744-2422.



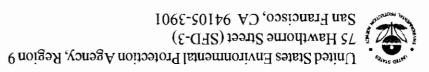
# Mailing List Update for The O'Brien Corporation

We need your help to update our mailing list. Please check off the box below which fits your situa-

tion and complete t	ne coupon. Or you may call (800) 231-3075 toll free to give us this information.
If you're on our li	t and there are no changes, you do not have to reply. Thank you.
•	
☐ Ther	is a <u>change</u> in your address.
- □ You	vould like to be added to our mailing list.
☐ You	would like to be deleted from our mailing list.
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Address:	
Audicss.	
City, State, Zip:	Telephone (optional):
Return to: Vick	Semones
U.S.	EPA, 75 Hawthorne Street (SFD-3)
•	7

San Francisco, CA 94105

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**INSIDE:** U.S. EPA Proposed Soil Cleanup at The O'Brien Corporation in South San Francisco



### OPPORTUNITIES FOR PUBLIC INVOLVEMENT

45-day Public Comment Period, July 28 to September 10, 1999 7PM to 9PM

Public Meeting, August 26, 1999 Municipal Services Building, 33 Arroyo Drive, South San Francisco

**EPA wants your comments** on this proposed remedy for soil contamination at the O'Brien Corporation in South San Francisco. We hope that you will review the available information concerning the site and participate in the process by making verbal or writen comments.

You can make a difference. Your comments can be made either verbally or in writing at the Public Meeting or you can send written comments, post-marked no later than September 10, 1999, to:



Thomas P. Kelly
Project Manager
U.S. EPA
75 Hawthorne Street (WST-5)
San Francisco, CA 94105-3901
e-mail: kelly.thomas@epamail.epa.gov



### Introducción

La Agencia de Protección Ambiental de los Estados Unidos (EPA, por sus siglas en inglés), anuncia el remedio propuesto para la contaminación de suelo en la facilidad de 26 acres de O'Brien Corporation , localizada en 450East Grand Avenue, South San Francisco, CA (véa la Figura 1).

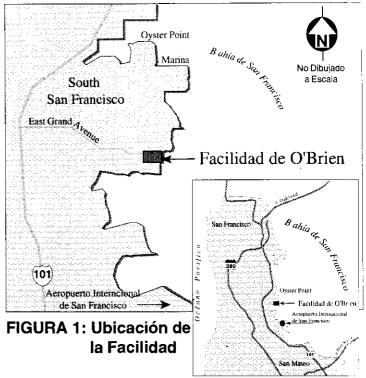
La facilidad de 26 acres en South San Francisco era originalmente propiedad de W.P. Fuller y ha sido utilizada para manufacturar pintura desde 1898. La Corporación O'Brien compró la facilidad en 1969. ICI Glidden compró recientemente las restantes operaciones de manufactura de pintura, un área de approximadamente 7 acres (véa la Figura 2). Excepto por la porción que es ahora la propiedad de ICI Glidden (el almacén y el edificio de manufactura al oeste del almacén), todas las estructuras han sido removidas de la facilidad.

# Oportunidad para comentar

Reunión Pública 26 de agosto de 1999 de 7PM a 9PM en el Edificio de Servicios Municipales, Salon Comunal, 33 Arroyo Drive, South San Francisco

El Período de comentario público dura 45 días 28 de julio hasta el 10 de septiembre de 1999

La EPA le invita a comentar acerca del remedio propuesto en la reunión pública o en cualquier momento durante el periodo de comentario público. La EPA no tomará una decisión final sobre el remedio propuesto hasta que todos los comentarios públicos hayan sido considerados. Todas las personas que comente acerca del remedio propuesto será n notificada de la decisión final.



# ¿Cuál es el problema?

Años de operaciones de manufactura de pintura han resultado en la contaminación de suelos con plomo, arsénico, y químicos orgánicos semivolátiles en la propiedad. De estos contaminantes, el plomo es el más dominante en términos de la extension y de los niveles de los contaminación. El pomo se haya en el suelo a niveles tan altos como 5.9%.

El público no está expuesto a la contaminación en la propiedad porque ésta ha sido cercada. Los empleados actuales no están expuestos a la contaminación de manera significativa, ya que su trabajan primordialmente dentro de los edificios que estan en una porción de la facilidad que ha sido pavimentada. Sin embargo, de no ser atendida, la contaminación podría presentar un riesgo a futuros empleados en la facilidad, principalmente por medio de la ingestión e inhalación a largo plazo de los suelos o del polvo contaminado en la facilidad.



# Remedio Propuesto para el Suelo

La EPA está proponiendo dos remedios diferentes para diferentes partes de la facilidad. Para el almacén y sus alrededores, el remedio propuesto consiste de cubrir el area. La cubierta consiste de pavimento de asfalto alrededor del almacén y el edificio de administración así como los edificios mismos y los cimientos de concreto del área de tanques de almacenaje. La mayoría del pavimiento ya existe en la facilidad, sólo una pequena franja de asfalto debe ser añadida en el lado norte del almacén para completarlo. La cubierta eliminará la exposición humana y ecológica al suelo contaminado.

Para la parte de la propiedad que ya está cubierta, O'Brien o ICI Glidden deben someter controles institucionales (restricciones a la escritura de la propiedad) que logren los siguientes objetivos:

- Asegurar que el área permanezca cubierta con asfalto o concreto
- Restringir el uso futuro de la propiedad a usos comerciales o industriales, a menos que otros usos sean aprobados por la EPA o DTSC
- Minimizar excavaciónes en el área cubierta
- De ser necesarias las excavaciones, notificar a la EPA o al DTSC por lo menos 14 días por adelantado de cualquier actividad planificada y explicar como los suelos contaminados seran manejados
- Caracterizar todo suelo excavado bajo la cubierta que no fue reemplazado en la excavación original para determinar si los requisitos de RCRA aplican al manejo y disposición del suelo

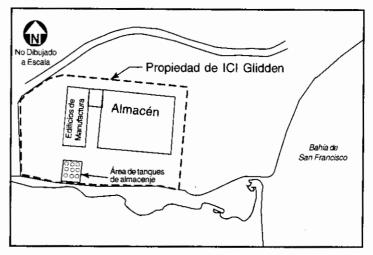


FIGURA 2: Propiedad de ICI Glidden

 Los edificios existentes podrán ser demolidos y edificios nuevos podrán ser construidos, siempre que el área se mantenga cubierta durante y despues de completar las actividades de construcción y demolición

Los controles institucionales deberán ser mantenidos permanentemente, a menos que la EPA o el Departamento de Control de Substancias Tóxicas de California (DTSC, por sus siglas en inglés) decidan que no se necesita limpieza adicional.

Para el resto de la facilidad, el remedio propuesto consiste de (1) excavar el suelo contaminado (mostrado en la **Figura 3**) que excede niveles de limpieza de suelos de la EPA (véa la **Tabla 1**); (2) tratar el suelo con contaminación de plomo o arsénico añadiendo cal, fosfatos modificados, o silicatos para que el plomo o el arsénico ya no sean móviles en el medio ambiente, o transportando el suelo contaminado fuera de la propiedad a una planta de tratamiento y disposición aprobada por

Contaminante	Nivel de Limpieza de Suelo de la EPA	Niveles Máximos en la Propiedad
Arsénico	30 mg/kg*	60 mg/kg
Plomo	1,000 mg/kg	59,000 mg/kg
benzo(a)anthracene	3.6 mg/kg	8.4 mg/kg
benzo(b)fluoranthene	3.6 mg/kg	11 mg/kg

TABLA 1: Niveles de Limpieza de Suelos de la EPA

<sup>\*</sup> mg/kg (miligramos por kiligamo)



RCRA; (3) transportando los suelos contaminados con químicos orgánicos volátiles o semivolátiles fuera de la propiedad a una planta con permiso para tratamiento y disposición; y (4) rellenando las áreas excavadas con suelo limpio.

Basándose en información limitada, O'Brien ha estimado que excavará 3,500 yardas cúbicas de suelo contaminado. Como parte del remedio, O'Brien debe someter un plan para completar la caracterización de la extensión y profundidad de la contaminación mostrada en la **Figura 3**. Luego de tratar el suelo contaminado, O'Brien obtendrá muestras de confirmación para verificar que los suelos tratados han dejado de ser desperdicios peligrosos.

# Otras Actividades de Limpieza

La propiedad operó previamente varias unidades reglamentadas por RCRA, incluyendo un área de almacenaje de desperdicios peligrosos, dos tanques de almacenaje de desperdicios peligrosos y tres embalses de desperdicios peligrosos. El DTSC aprobó la certificación de clausura (el último paso en el proceso de clausura) el 18 de julio de 1988 para los embalses y los tanques. En mayo de 1994, el DTSC aprobó la clausura del área de almacenaje de desperdicios peligrosos.

### Historia

La Orden de Acción Correctiva de la EPA, expedida el 16 de abril de 1991, requiere que O'Brien tome acción immediata, como medida interina, para limpiar la contaminación en el rompeolas. El rompeolas fue construído en la década del 1910, presumiblemente para protejer el relleno en el borde sur de la propiedad. La EPA aprobó el plan de O'Brien el 24 de diciembre de 1991. O'Brien removió el rompeolas entre marzo de 1992 y mayo de 1992. La Figura 3 muestra la ubicación del rompeolas, los embalses, los tanques, y el área de almacenaje de desperdicios peligrosos en relación a las otras áreas que están sujetas al remedio que la EPA está proponiendo ahora.

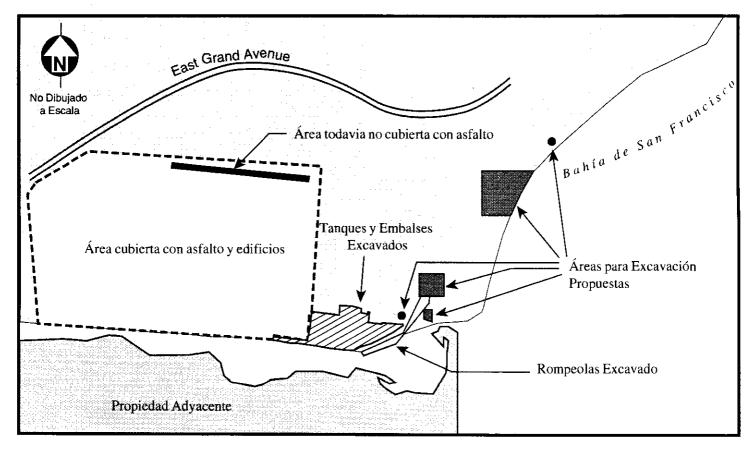


FIGURA 3: Ubicación de las Medidas Correctivas Propuestas y Completadas



# ¿Cuál es el paso siguiente?

O'Brien continúa recopilando información para determinar el impacto de la contaminación del suelo al agua subterránea. Cuando la EPA llegue a una conclusión acerca de la extensión de la contaminación del agua subterránea y de la alternativa más apropriada para su limpieza de ser necesaria, la EPA proveerá otro anuncio al

público acerca de la decisión que piensa proponer. Como mínimo, esta propuesta incluirá el monitoreo continuo del agua subterránea gradiente abajo del área de contaminación de suelo cubierta en el almacén y sus alrededores.

# El Programa de Acción Correctiva de RCRA

El programa de RCRA es responsable de la implementación de la Ley de Conservación y Recuperación de Recursos de 1976 y las Enmiendas de Desperdicios Peligrosos y Sólidos de 1984, que regulan a 1) los generadores y transportistas de desperdicios peligrosos y 2) las plantas de tratamiento, almacenaje y disposición de desperdicios peligrosos.

El Programa de Acción Correctiva de RCRA es la parte del programa de RCRA que requiere la investigación y la limpieza de toda la propiedad en las plantas de tratamiento, almacenaje y disposición, tales como la facilidad de la Corporación O'Brien. La gráfica siguiente muestra el proceso de acción correctiva de RCRA para la investigación y la selección e implementación del remedio de limpieza.

Evaluación Inicial Investigación de Evaluación de Estudio de Implementación de Medidas de la Facilidad de la Facilidad de Riesgo Medidas **RCRA RCRA** (RA, por sus Correctivas Correctivas (RFA, porsus (RFI, por sus (CMS, por sus (CMI, por sus siglas en inglés)1 siglas en inglés) siglas en inglés) siglas en inglés) siglas en inglés) Las Medidas Interinas Ocurren Cuando Son Necesarias Identificar y Examinar la Desarrollar un Desarrollar un Tomar en facilidad evaluar las consideración y plan para el plan para el alternativas de responder a los RFI RA y llevar a Caracterizar las comentarios limpieza cabo la unidades de Investigar la evaluación de Recomendar el Desarrollar el manejo de naturaleza y riesgo remedio diseño de la desperdicios extension de preferido medida Establecer Determinar la correctiva y contaminación requisitos de Selecccionaria necesidad de limpieza comenzar la alternativa acción Implementar construcción basados en correctiva medidas Invitar este RA y en interinas, de comentario Invitar implementar el el RFI ser necesario público comentarios remedio públicos Monitorear la implementación La Participación Pública Ocurre Durante Todo el Proceso para asegurar conformidad con estándares

<sup>&</sup>lt;sup>1</sup> La EPA propone usar las Metas de Limpieza Preliminares de la Región 9 de la EPA como niveles de limpieza en vez de llevar a cabo una evaluación de riesgo específica para esta propiedad.



## Para Más Información

Para información técnica acerca de la facilidad, incluyendo la Declaración de Base, la cual explica las razones para el remedio propuesto, favor de contactar a:

Thomas P. Kelly, Project Manager, U.S. EPA,

75 Hawthorne Street (WST-5), San Francisco, CA 94105-3901, teléfono: 415-744-2070, correo electrónico: kelly.thomas@epamail.epa.gov.

Para hojas informativas adicionales o información general acerca del proceso de acción correctiva de RCRA, favor de contactar a:

Vicky M. Semones, Community Involvement Coordinator, U.S. EPA, 75 Hawthorne Street (SFD-3), San Francisco, CA 94105-3901, teléfono: 415-744-2422, correo electrónico: semones.vicky@epamail.epa.gov.

Para examinar el Registro Administrativo de la EPA y los documentos de la facilidad que respaldan este remedio propuesto, puede programar una visita al Centro de Archivos de RCRA, U.S. EPA, 75 Hawthorne Street, 7th Floor, San Francisco, CA, llamando a Vern Christianson al 415-744-2422.

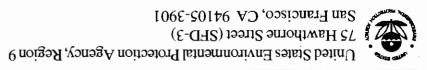


# Revisión de la Lista de Correspondencia para la Corporación O'Brien

Necesitamos su ayuda para revisar nuestra lista de correspondencia. Por favor, marque la

al (800) 231-	3075 para darnos esta información. Si usted está en nuestra lista, y no hay bio, no tiene que responder. Gracias.
	Hay un <u>cambio</u> en su dirección.  Quisiera ser <u>añadido</u> a la lista de correspondencia.  Quisiera ser <u>removido</u> de la lista de correspondencia.
Nombre:	
Dirección: _	
Ciudad, Estac	lo, Código Postal: Teléfono (opcional):
Devolver a:	Vicky Semones U.S. EPA, 75 Hawthorne Street (SFD-3) San Francisco, CA 94105

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# POR DENTRO: La EPA Ha Propuesto la Limpieza

del Suelo en la Corporación O'Brien en South San Francisco



# OPORTUNIDADES PARA LA PARTICIPACIÓN PÚBLICA

Período de Comentario Público de 45 días, desde ed 28 de julio al 10 de septiembre de 1999 Reunión Pública, 26 de augusto de 1999, 7PM a 9PM Edificio de Servicios Municipales, 33 Arroyo Drive, South San Francisco

La EPA desea sus comentarios acerca de este remedio propuesto para la contaminación del suelo en la facilidad de la Corporación O'Brien en South San Francisco. Esperamos que usted examine la información disponible acerca de esta facilidad y que participe en el proceso contribuyendo comentarios verbales o escritos.

Usted puede hacer la diferencia. Sus comentarios puede ser hechos verbalmente o por escrito en la reunión pública o pueden ser enviados por escrito, timbrados a no más tardar del 10 de septiembre de 1999, a:



Thomas P. Kelly
Project Manager
U.S. EPA
75 Hawthorne Street (WST-5)
San Francisco, CA 94105-3901
nail: kelly.thomas@epamail.epa.



NFIDE	NTIAL FAX REQUI	EST FORM	<b>M</b>	1 1						
TO:	Name: Diane Mims									
	Organization: Oakland RWOCB Mail Stop:									
	Fax Number:	Area Code ( <b>5</b> / <b>o</b> )	Number 286-1380 Number 286-0915							
	Verification Number:	Area Code (510)								
FROM: Name: Larry Bowerman  U.S. Environmental Protection Agency Region 9  75 Hawthorne Street San Francisco, CA 94105										
	Branch/Section: Corr	ective Action	Office							
	Mail Stop: H-3-1									
	Phone Number:	Area Code (415)	Number <b>744-2051</b>							
	Fax Number:	Area Code (415)	Number	744-1044						
	Verification Number:	Area Code (415)	Number	744-2083 744-2133 744-2113						
Date:	9 24 96	Pages	including cov	er: 5						
Subjec	t: O'Brien Corp M	OU								
Note: Diane, Per your request, attached is a copy of the O'Brien MOU. Hope this is useful. Lany JOB COMPLETED BY AND DATE:  (										
Job wa	as completed by:	Bur								
Date:	<del></del>	9/24/40	0							
For na	For name: dann bowerman.									

néceipt No. 3600

Oslar

MEMORANDUM OF UNDERSTANDING AMONG THE U.S. ENVIRONMENTAL PROTECTION AGENCY (US-EPA), THE DEPARTMENT OF TOXIC SUBSTANCES CONTROL (DTSC), AND THE REGIONAL WATER QUALITY CONTROL BOARD FOR THE SAN FRANCISCO BAY REGION (RWQCB) FOR THE REGULATORY OVERSIGHT OF THE INVESTIGATION AND REMEDIATION OF CONTAMINATION AT THE O'BRIEN CORPORATION SITE (EPA I.D. CAD0051304551)

### **PURPOSE**

This Memorandum of Understanding establishes the roles and responsibilities of the US-EPA, the DTSC, and the RWQCB (the Agencies) in the investigation and remediation of contamination at the O'Brien Corporation.

### **BACKGROUND**

The O'Brien Corporation is a paint and coatings manufacturer located at 450 Grand Avenue in South San Francisco (EPA ID CAD 005130455). Currently, the US-EPA and the DTSC are engaged in regulatory oversight of the facility. The US-EPA is overseeing corrective action being conducted pursuant to a RCRA 3008(h) Administrative Order issued by the US-EPA to the O'Brien Corporation (found in US-EPA Docket No. RCRA-09-890016, effective April 19, 1991). The DTSC had previously provided oversight for the closure of a hazardous waste storage area and closure of three surface impoundments. Both the US-EPA and the RWQCB are concerned about off-site contamination that exists in the San Bruno Channel Fill and along the shoreline of the San Francisco Bay.

In an effort to streamline our regulatory efforts, and to consistently address both the facility and adjacent impacted areas as a whole, the Agencies have agreed that the US-EPA will act as the lead agency in requiring investigation and remediation, in the areas of mutual concern, except where noted otherwise in this agreement.

### I. SCOPE

This MOU encompasses regulatory review, approval of technical documents generated during the project, and oversight of the investigation and cleanup of the O'Brien Facility, including off-site releases. It shall be used to establish the relationship of the Agencies and to guide communication between them, in activities involving the O'Brien facility.

### II. PRINCIPLES

It is a basic aim of this MOU, and the policy of the Agencies, to avoid a duplication of effort. To the extent staff and other resources allow, and in a manner set forth here, the Agencies agree to cooperatively implement the activities described in this MOU. This approach is in the best interest of public health and the environment.

To efficiently implement this agreement, each agency agrees to designate a person to serve as project coordinator for this MOU. Any agency may individually seek recovery for the cost of their actions from the O'Brien Corporation.

### III. RESPONSIBILITIES OF THE AGENCIES

### A. TASKS

### 1. Former Surface Impoundment Area (FSIA)

- a. The US-EPA will seek O'Brien's voluntary concurrence to incorporate the FSIA into the US-EPA's RCRA 3008(h) Administrative Order as a Solid Waste Management Unit (SWMU). The US-EPA will act as the lead agency in requiring soil and groundwater investigation, and remediation, if deemed necessary in this area. This action is intended to make investigation of the FSIA more efficient by incorporating it into the site-wide investigation under the EPA's order. Nonetheless, this MOU does not limit the DTSC's authority to issue a post-closure permit to O'Brien.
- b. The Agencies will jointly decide on locations for soil and groundwater sampling in the area to characterize contamination.
- c. The DTSC will act as the lead agency in providing oversight for field work performed for the above mentioned characterization.
- d. The Agencies will jointly evaluate the data collected in this area, and determine the necessity for remediation in this area.
- e. If remediation is necessary, the US-EPA will act as lead agency in evaluating the Corrective Measures Study, and providing oversight for the Corrective Measures Implementation for the area.

### 2. The San Bruno Channel Fill (SBCF) and Shoreline of the San Francisco Bay

a. The US-EPA will include the SBCF and the S.F. Bay Shoreline into the US-EPA's RCRA 3008(h) order. The US-EPA will act as lead agency in requiring soil, sediment, and surface water investigation, and remediation, if deemed necessary, in these areas.

- b. The US-EPA and the RWQCB will jointly decide on sample locations in this area.
- c. The RWQCB will act as the lead agency in determining screening levels, appropriate biological assays to be performed, and clean-up standards in these areas. The RWQCB will also act as the lead agency in providing oversight for field work performed in these areas.
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- e. If O'Brien will not agree to investigate and remediate this area under the EPA RCRA 3008(h) order, the RWQCB will issue a Cleanup and Abatement Order that will require these activities.

### **B. COORDINATION PROCEDURES**

- 1. An agency with primary responsibility for a given task is responsible for coordinating and communicating with other agencies in a timely manner. This includes, but is not limited to: arranging meetings, setting schedules, sharing technical evaluations; and providing relevant technical reports and information.
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- 3. In the event there are any conflicts or disagreements arising in the interpretation and/or implementation of this MOU, the Agencies in disagreement will approach the US-EPA in an effort to resolve the conflict or disagreement.
- 4. Nothing in this MOU is intended or shall be construed to limit or preclude the US-EPA, the DTSC, or the RWQCB from taking any action authorized by law to protect public health or safety or the environment and recovering the cost to do so.

Jarry Dewermon	3/14/95
Larry Bowerman, Acting Chief RCRA Facilities Branch	Date
U. S. Environmental Protection Agency, Region 9	
Supton More	3/20/95
Stephen I. Morse, Chief	Date
Toxics Cleanup Division Regional Water Quality Control Board,	
San Francisco Bay Region, Region 2	
California Environmental Protection Agency	
Lectur Vandena	3/23/95
Lester Kaufman, Chief	Date /
Facility Permitting Branch	
Department of Toxic Substances Control Region 2 California Environmental Protection Agency	
James Little Hall Fred Control of Gordy	



# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION IX 75 Hawthorne Street San Francisco, CA 94105

### **Enforcement Confidential**

Mr. John Kaiser, R.G., C.E.G. Senior Engineering Geologist California Regional Water Quality Control Board San Francisco Bay Region 2101 Webster Street, Suite 500 Oakland, CA 94612

Dear Mr. Kaiser:

I have enclosed a revised copy of the Memorandum of Understanding (MOU) for the O'Brien Corporation in South San Francisco. If you find it acceptable and Steven Morse has signed it, forward the MOU to Michael Pixton with the Department of Toxic Substances Control. Additionally, please consider the MOU "Enforcement Confidential" until all the agencies have met and agreed to consider otherwise.

We have made two changes from the previous draft of the MOU that you reviewed. First, Lester Kaufman, Chief of the Department of Toxic Substances Control (DTSC), Region 2 Facility Permitting Branch will now sign the MOU for DTSC. Second, we have changed the section on the San Bruno Channel Fill (SBCF). The last draft of the MOU stated that the Regional Water Quality Control Board (RWQCB) would issue an order, to O'Brien, covering the SBCF. Based on a discussion between Tom Kelly, of my staff, and Diane Mims, with RWQCB, we changed this. The section now reads, as the original draft MOU had, that EPA will be the lead agency for this area. Unfortunately, because our order does not specifically include the SBCF, we may have difficulty persuading O'Brien to cleanup the area under our current order. Furthermore, O'Brien prefers to cleanup under a RWQCB order issued to all the parties involved (eg. the adjacent property owner and the O'Brien site's former owner). For these reasons, the MOU provides for the possibility that RWQCB might issue an order covering the SBCF.

NO

" OFFICIAL

DATE "

GIVEN FOR

THESE DOCUMENTS

If you have any questions, or the document needs further revision, contact Tom Kelly at (415) 744-2070.

Sincerely,

Larry Bowerman, Acting Chief RCRA Facilities Branch (H-3)

### enclosure

cc:

Michael Pixton (with enclosure)

Department of Toxic Substances Control

700 Heinz Avenue, Suite 200

Berkeley, CA 94710

	H-3-1			
SYMBOL	H-3-1 8.13.			
SURNAME	T. Kelly Bowerman			
DATE	3/13/95 3/14/95			
U.S. EPA	CONCURRENCES	(	OFFICIAL E	FILE COPY

MEMORANDUM OF UNDERSTANDING AMONG THE U.S. ENVIRONMENTAL PROTECTION AGENCY (US-EPA), THE DEPARTMENT OF TOXIC SUBSTANCES CONTROL (DTSC), AND THE REGIONAL WATER QUALITY CONTROL BOARD FOR THE SAN FRANCISCO BAY REGION (RWQCB) FOR THE REGULATORY OVERSIGHT OF THE INVESTIGATION AND REMEDIATION OF CONTAMINATION AT THE O'BRIEN CORPORATION SITE (EPA I.D. CAD0051304551)

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- b. The Agencies will jointly decide on locations for soil and groundwater sampling in the area to characterize contamination.
- c. The DTSC will act as the lead agency in providing oversight for field work performed for the above mentioned characterization.
- d. The Agencies will jointly evaluate the data collected in this area, and determine the necessity for remediation in this area.
- e. If remediation is necessary, the US-EPA will act as lead agency in evaluating the Corrective Measures Study, and providing oversight for the Corrective Measures Implementation for the area.

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- c. The RWQCB will act as the lead agency in determining screening levels, appropriate biological assays to be performed, and clean-up standards in these areas. The RWQCB will also act as the lead agency in providing oversight for field work performed in these areas.
- d. The US-EPA and the RWQCB will jointly evaluate the data collected in this area, determine the necessity for remediation, and evaluate remedial options for these areas.
- e. If O'Brien will not agree to investigate and remediate this area under the EPA RCRA 3008(h) order, the RWQCB will issue a Cleanup and Abatement Order that will require these activities.

#### **B. COORDINATION PROCEDURES**

- 1. An agency with primary responsibility for a given task is responsible for coordinating and communicating with other agencies in a timely manner. This includes, but is not limited to: arranging meetings, setting schedules, sharing technical evaluations; and providing relevant technical reports and information.
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- 4. Nothing in this MOU is intended or shall be construed to limit or preclude the US-EPA, the DTSC, or the RWQCB from taking any action authorized by law to protect public health or safety or the environment and recovering the cost to do so.

Larry Bowerman, Acting Chief	3/14/95
Larry Bowerman, Acting Chief RCRA Facilities Branch U. S. Environmental Protection Agency, Region 9	Date
Stephen I. Morse, Chief Toxics Cleanup Division Regional Water Quality Control Board, San Francisco Bay Region, Region 2 California Environmental Protection Agency	Date
Lester Kaufman, Chief Facility Permitting Branch Department of Toxic Substances Control Region 2 California Environmental Protection Agency	Date

# CONFIDENTIAL

### O'Brien Meeting

- ١. Purpose of this Meeting
  - Α. Purpose
    - Talk about the "Big Picture" 1.
    - Same Page -- REASONABLE 2.
    - How would O'Brien like to see this site proceeding through C/A 3.
    - Find out how we are going to proceed from here
  - Level of EPA Involvement B.
    - 1. Medium Priority site
    - Taking a significant amount of time -- Staff, Geologist, 2. Toxicologist, Biologist or Eco-Toxicologist
- 11. O'Brien's Response to EPA comments on the RFI
  - No Mercury Testing Α.
  - Dissolved not Total Lead В.
    - Total Lead not bioavailable -- EPA ecotoxicologist or biologist
  - No further investigation of Former San Bruno Channel Fill C.

  - Why compare on-site soils to sediment cleanup levels (Table 3)?

    Lesoil imprected by Arsenic Discussion of Arsenic Sediment cleanup levels
- 111. Risk Assessment
  - Α. Good News

Methodology OK Good History of investigation Section 2 Yes, EPA will buy off on the fact that this site is industrial Furthermore, we will probably even buy off on the fact that groundwater will not be used as drinking water (we may want a deed restriction)

- В. **Bad News** 
  - 1. More Sampling Needed
    - Outside SWMUs a.
    - Even inside the SWMUs b.
    - Level of sampling can change with the remedy proposed
  - 2. Will the risk assessment or next RFI Report clarify
    - Fill material as the source of soil contamination
    - Lead levels not bioavailable? (pottery glaze)

"Blas" in G.W Data "Blas" in Soils Data 3. RURCB want in on the Ste Investigation

#### IV. Eco-Assessment

- A I'm trying to get an experienced person for the Eco-Assessment
  - 1. Up front involvement
  - 2. Work plan review
  - 3. Report review
- B. Lead Total vs. Dissolved
- C, Will the Eco Assessment include groundwater monitoring?
  - 1. They don't have enough wells to model the site
- D. Screening Levels as Benchmarks -- OK

#### V. Former San Bruno Channel

- 1. I don't want to force O'Brien to pay for the cleanup if Haskins really is responsible
  - a. RWQCB Perspective
    - i. Contamination in former channel -- Hot Spot
    - ii. Haskins owns the site and may be responsible
    - iii. O'Brien is next door and may also be responsible
    - iv. the original fill may have been contaminated, in which case, Haskins is still responsible
- √ 2. Isotopic Lead Study -- Is it coming?
  - 3. More proof on the source of the fill
  - 4. I'm trying to get an attorney assigned to resolve a few issues (eg. Is Fuller-O'Brien responsible for the W.P. Fuller Company's contamination even though they bought the assets, not the company

Of Minopetion done in 1984;
Nagie isifollowing up on Of Miviolations
Letter went out recently whist of viol.

Spoke w/ Nagie Motion of DTSC-Berkeley 5/19/93

an O'Brien (510) 540-3888 Desires to close-out
Of Mease

- She's responsible for recommendation to management on how to proceed with PC permit, appears that she feels that 200 ppm is a relatively clean level in light of 500 ppm being the residential level, and that O'Brien has a case that no PC permit should be required.

Aindicated that to my recollection, D75 C. nor EfA ever sent a letter to O'Brien certifying clean closure. Therefore we do have a legal hold.

- We came to conclusion that at least until O'Brienie full RA/EE data set is in, we should wait on deciding the PC permit issue

- I also indicated that for the RA/EE

I would require O'Brien (or get EPA/contractor)

to sollect unfiltered ow samples)

from the DE wells. I mentioned that

the filtered samples over the last couple

years have been relatively clean, but

well MM-11 has had above MCL Pb levels.

- Michael Pixton is working w/Najee on

enforcement action for O+M violations

- Summary of conversation w/ Socar Portocursers of DTSC regarding closed of CSA, concrete pad on 8/16/93 (O'Brien).
- O'Brien submitted closure documents"

  for pad saying "more-or-less" all

  structures and contaminated media

  removed and everything is O.K. ### That

  with these O'Brian did not provide

  confirmatory analyses.
- Main reason for call was that Oscar wanted any imput from me on the closure of this unit, and any key issues or concerns.
- In indicated that DTSC should make secre that any soil cleanup level is consistent w/EPA risk assessment and that DTSC might consider making the cleanup level contingent on the RA.
- -My second concern was that DTSC make sure that O'Breen removed all the pot shards and delves that underlaid the CSA pad. . Ithe
- Sampling for not just lead, but also VOCs, SVOCS and any metals that were managed at this unit.

NOD to the O'Breen Closure plan for thes uneto. He may incorporate my concerns CONFIDENTIAL

# ENFORCEMENT CONFIDENTIAL

D \* R \* A \* F \* T

August 25, 1994

# INTERAGENCY MEMORANDUM OF UNDERSTANDING REGARDING THE O'BRIEN CORPORATION (EPA I.D.# CAD005130455)

#### Parties Involved

Alisa Greene, Chief RCRA Corrective Action Section, H-4-4 U.S. Environmental Protection Agency (EPA)

Wei Wei Chui, Unit Manager Statewide Compliance Unit Date Control (DTSC), Region 2

John Kaiser, Section Leader Toxics Cleanup Division California Regional Water Quality Control Board, Region 2

# <u>Purpose</u>

This Memorandum of Understanding establishes the roles and responsibilities of EPA, DTSC and RWQCB in the investigation and remediation of contamination at the O'Brien Corporation.

# <u>Background</u>

The O'Brien Corporation is a paint and coatings manufacturer located at 450 Grand Avenue in South San Francisco. Currently, EPA and DTSC are engaged in regulatory oversight at the facility. EPA is overseeing corrective action being conducted pursuant to a RCRA 3008(h) Administrative Order issued by EPA to O'Brien (U.S. EPA Docket No. RCRA-09-89-0016, effective April 19, 1991). DTSC had previously provided oversight for the closure of a hazardous waste storage area and closure of three surface impoundments. Currently, DTSC is

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#### ENFORCEMENT CONFIDENTIAL

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providing oversight for groundwater monitoring at the former surface impoundment area. Both EPA and RWQCB are concerned about off-site contamination that exists in the San Bruno Channel Fill and along the shoreline of the San Francisco Bay.

In an effort to streamline our regulatory efforts, and address the facility consistently and holistically, EPA, DTSC and RWQCB have agreed that EPA will act as the lead agency in requiring investigation and potential remediation of the areas of mutual concern. Enforcement alternatives have been identified.

# Former Surface Impoundment Area (FSIA)

- 1. EPA will incorporate the FSIA into EPA's RCRA 3008(h) Administrative Order as a Solid Waste Management Unit (SWMU). EPA will act as the lead agency in requiring soil and groundwater investigation, and remediation if deemed necessary, in this area.
- 2. EPA, DTSC and RWQCB will jointly decide on locations for soil and groundwater sampling in this area.
- 3. DTSC will act as the lead agency in providing oversight for field work performed in this area.
- 4. EPA, DTSC and RWQCB will jointly evaluate the data collected in this area, and determine the necessity for remediation in this area.
- If remediation is necessary, EPA will act as the lead agency in evaluating the Corrective Measures Study, and providing oversight for the Corrective Measures Implementation for the area.
- 6. If O'Brien is agreeable to this arrangement, DTSC will waive DTSC's requirement for postclosure groundwater monitoring in this area. If O'Brien is not agreeable to the arrangement, DTSC will issue an enforcement order that will require postclosure monitoring in this area.

# San Bruno Channel Fill (SBCF) and Shoreline of San Francisco Bay

 EPA will include the SBCF into EPA's RCRA 3008(h) order as a SWMU. The shoreline of the San Francisco Bay adjacent to the facility will also be included. EPA will act as the lead agency in requiring soil, sediment and surface water

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investigation, and remediation if deemed necessary, in these areas.

- 2. EPA and RWQCB will jointly decide on sample locations in these areas.
- RWQCB will act as the lead agency in determining screening levels, appropriate biological assays to be performed, and clean-up standards in these areas.
   RWQCB will also act as the lead agency in providing oversight for field work performed in these areas.
- EPA and RWQCB will jointly evaluate the data collected in these areas, determine the necessity for remediation, and evaluate remedial options for these areas.
- 5. If O'Brien will not agree to investigate and remediate the SBCF under the EPA RCRA 3008(h) order, RWQCB will issue a Cleanup and Abatement Order that will require these activities.



# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX

75 Hawthorne Street San Francisco, Ca. 94105-3901

APR 24 1002

Ms. Charlene Williams Cal-EPA 700 Heinz Avenue Suite 200, Bldg. F Berkeley, CA 94070

Re: Enforcement Follow-up for Potential CME Violations at the O'Brien and Tosco RCRA Facilities

Dear Charlene:

This letter is in response to our conversation earlier this month regarding enforcement follow-up for potential Compliance Monitoring Evaluation (CME) report violations at the O'Brien and Tosco facilities. Based on our recent review of the O'Brien and Tosco CMEs, dated July 11, 1988 and September 1, 1989, respectively, we have determined that none of the violations alleged by DTSC is addressed in our unilateral corrective action orders (H-orders). It is acknowledged that the EPA project manager assigned to Tosco verbally agreed to include the CME recommendations in the revised Tosco H-order that became effective on September 6, 1990 (original order was issued on February 24, 1989). With regard to the O'Brien site, neither myself nor the O'Brien project manager was aware of any agreement with DTSC to include the CME recommendations in the revised O'Brien H-order that became effective on May 19, 1991 (original order was issued on February 24, 1989). Before going into the specific enforcement options that are available to the Agencies, I would like to provide you with some background information on the two sites.

#### The O'Brien CME lists the following potential violations:

- 40 CFR 270.14(c)(2-4 & 7) violations pertaining to inadequate characterization/delineation of the uppermost aquifer; failure to determine the rate and extent of contaminant migration; and failure to submit a compliance monitoring plan, or feasibility plan for a corrective action groundwater monitoring plan.
- 40 CFR 265.91-.94 violations pertaining to inadequate numbers and locations of upgradient and downgradient monitoring wells; inadequate sampling and analysis plan; incomplete sampling/ analysis of first year detection monitoring constituents; failure to submit and implement a groundwater assessment outline/plan since elevated lead levels were verified in some wells; failure

to perform statistical comparisons between upgradient and downgradient groundwater data; and failure to maintain a current sampling and analysis plan on-site.

#### The 1989 Tosco CME lists the following potential violations:

- 40 CFR 265.91-.93 violations pertaining to inadequate upgradient and downgradient wells due to hydraulic gradient reversals; inadequate characterization/delineation of the uppermost aquifer and the state of hydraulic interconnection between water bearing zones; lack of B-zone (second hydrogeologic zone) wells; inadequate sampling and analysis plan; and failure to determine the rate and extent of contaminant migration.

Based on these CMEs, each site has numerous potential Class I groundwater violations that should be addressed. The situation that faces us now is how to proceed with imposing the requirements (recommendations) of the CMEs at both facilities. The primary options that I see being available are the following: issue post-closure (PC) permits to both facilities that include the CME recommendations; amend the existing H-orders to address these issues; or, pursue separate State or EPA enforcement actions, either informal or formal.

In my opinion, the best overall approach to this problem is the issuance of PC permits, as these will be required anyway since the facilities did not clean-close their surface impoundments, and received hazardous waste at these units after July 26, 1982. Another plus to using PC permits is that the CME recommendations are better articulated through the basic 40 CFR 264 and 270 regulatory structure than through H-order language. Additionally, an Operations and Maintenance (O & M) inspection was performed by DTSC at O'Brien last summer and the PC permit was called-in in August. It should be noted (based on a conversation with Sal Ciriello of DTSC), however, that the State does not have a permitting staff person assigned to this case who can review O'Brien's response that a PC permit is not required (O'Brien contends that its surface impoundments were cleanclosed, even though there has been no Agency correspondence confirming this assertion).

The main drawback to the PC permit approach is the time factor; as both facilities have medium priority rankings based on EPA's Environmental Priority Initiative (EPI) process, they would probably not be considered high priority candidates for inclusion in the FY 1993 State Workplan. Based on conversations with my staff, however, it appears that the regulated unit groundwater monitoring issues at both sites are of lower environmental significance than the other solid waste management units. For this reason, I would be comfortable with waiting until FY 1994 to call-in the Tosco PC permit application and follow-up on O'Brien's response to the PC permit call-in. In the interim, the State may want to consider an informal action (NOV) to let O'Brien and Tosco know we consider these violations to be

outstanding, and that they must be corrected before issuing PC permits.

The second option listed, H-order modification, is a viable approach, but because or the relatively low environmental significance posed by the regulated units, I do not think it is prudent to invest the EPA resources at this time. Although issuance of a new order is listed as an option, it would be the least desirable in my opinion due to the State and EPA resources involved, relatively low level environmental impact of the regulated units, and potential redundancy issues.

In conclusion, I believe that issuing PC permits with the appropriate 40 CFR 264 and 270 groundwater monitoring requirements, perhaps preceded by an informal action in the short-term, is the optimal approach to addressing the potential violations and recommendations contained in the existing CMEs. If you or your staff would like to discuss the issues in this letter, please contact Chris Prokop of my staff at (415) 744-2045. I will be out of the office from April 27 through June 1. In my absence, feel free to also discuss these issues with Steve Johnson at (415) 744-2148.

Sincerely,

Karen Schwinn, Chief Waste Compliance Branch

cc: Brian Lewis, DTSC-Headquarters



# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

#### REGION IX

# 75 Hawthorne Street San Francisco, Ca. 94105

December 13, 1991

Ms. Ratna Jain

PRC Environmental Management, Inc.

120 Howard Street, Suite 700

San Francisco, CA 94105

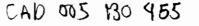
Re: Quality Assurance Project Plan for the O'Brien Facility

PRC's November 8, 1991 draft Quality Assurance Project Plan (QAPP) for the O'Brien facility has been reviewed. The comments provided in the attachment were generated during this review. Please submit a revised QAPP by January 3, 1991. If you have any questions please contact me at (415) 744-2045.

Sincerely,

Chris Prokop Chris Prokop

Corrective Action Section





# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

#### REGION IX ...

# 215 Fremont Street San Francisco, Ca. 94105

#### 1 4 JUN 1989

Ms. Patricia L. Houle Environmental Manager The O'Brien Corporation 450 East Grand Avenue South San Francisco, CA 94080

Re: Summary of EPA Position on Corrective Action Requirements for the O'Brien Facility Presented During the May 19, 1989 Technical Meeting

Dear Ms. Houle:

At the close of our meeting on May 19, 1989, I indicated that I would submit a written version of my comments to you concerning the Environmental Protection Agency's (EPA's) position on the status of corrective action at the O'Brien facility (facility). As you recall, the following areas of investigation were discussed:

- Breakwater
- Warehouse
- Suspected Former Landfill
- Abandoned Sewer Outfalls
- Underground Tank Closures
- Suspected Toluene Release
- Marsh Area
- ISD Groundwater Monitoring Workplan
- SWMUs from RFA

Over the course of our discussions, I offered comments on both the CME Workplan and the San Bruno Channel Fill Investigation (SBCFI) report. These two documents discuss, in varying levels of detail, the areas of investigation listed above. Since our meeting, I have received comments on the CME Workplan from the Department of Health Services (DHS), which are incorporated in this document. While DHS has not compiled comments on the SBCFI report as of this date, such comments are expected shortly. For reasons dicussed previously, the Regional Water Quality Contol Board (RWQCB) probably will not be in a position to offer comments on the corrective action at the facility for at least a couple months.

Before dealing with each of the areas of investigation separately, I would like to re-emphasize some general concerns with regard to corrective action at the facility. Specifically,

attachment #7

It is EPA's position that a post-closure permit will be required for the three closed surface impoundments because the post-closure permit applicability requirement has been met (i.e., certified closure occurred after the January 26, 1983 cut-off date-40 CFR §270.1(c)), and groundwater contamination downgradient of the surface impoundments has been demonstrated. The latter statement is supported by analytical data that shows lead levels in excess of the lead maximum concentration limit (MCL) in monitoring wells downgradient of the surface impound-I indicated during the meeting that EPA would consider a demonstration by the facility that sources other than the surface impoundments (i.e., elevated upgradient soil or groundwater contamination) have caused the elevated levels of lead in It should be noted, however, that condowngradient wells. clusively demonstrating that the residual lead levels in the surface impoundment area have not contributed significantly to the elevated lead levels in the groundwater will be very difficult due to the hydrogeologic complexities at the facility.

Commonly, while a facility is in the process of implementing a RCRA Facility Investigation (RFI), areas (SWMUs) are encountered for which little operational information exists. reason, a broad suite of compounds, frequently EPA's Appendix IX, is chosen for analytical purposes at some representative loca-Due to the fact that O'Brien has performed volatile and semi-volatile organic analyses, as well as ISD parameter monitoring, a limitation on the number of analytes for some SWMUs will be possible. The MW-21 area, however, is one area where a broad analytical list is appropriate due to the limited amount of information currently available. Therefore, one Appendix IX analysis should be performed on a groundwater sample from MW-21. The exact analytical list for other SWMUs will be determined on a case-by-case basis, in consideration of O'Brien's Road Map As a final note on analytical matters, it is EPA's understanding that O'Brien, in all future analyses, will run STLC analyses on soil samples whenever total metals concentrations are greater than ten times the STLC levels.

Shortly after our meeting began, it was suggested that rather than undertake a debate on the issues pertaining to each SWMU, O'Brien would respond to the Agency comments in a written reply. It is EPA's understanding, therefore, that O'Brien will submit a Road Map report detailing the operational history and degree of investigatory work completed for each SWMU. While other supporting documents will be referenced, this Road Map will be a stand-alone report.

Listed below are EPA and DHS comments on the CME Workplan, and EPA comments on the SBCFI report:

Appendix IX analysis should be run on the groundwater. If hazardous constituents are found that are clearly not of an O'Brien (or previous owner) source, this would support the off-site origin of the contaminants. Soil sampling should also be performed in the vicinity of well MW-21.

Abandoned Sewer Outfalls: While the sewer outfalls have been addressed in the SBCFI report, it is a concern to the Agencies that only one of the original twelve outfalls (not breakwater conduits) was located during the study. An explanation should be provided for this information gap.

Underground Tank Closures: Based on my file review, it appears that the agencies have little information on these tank closures. For this reason, O'Brien must submit a complete record of these closures to include, at a minimum, the number of tanks involved, their locations, engineering logs of the excavation and removal, descriptions of the products/wastes contained, the final disposition of the tanks and tank contents, decontamination procedures, nature and composition of backfill, and the names of the personnel who oversaw the closures.

Suspected Toluene Release: While this section of the SAWP refers to four quarters of groundwater monitoring data from well MW-19 that show no detectable concentrations of any priority organic compounds in the toluene spill area, O'Brien must reconcile the elevated levels of toluene (7,000 ppb) and ethylbenzene (120 ppb) that were found in well W-6 (page 21 of EPA RCRA Facility Assessment). Again, it is assumed that the Road Map report will discuss, in detail, the existing analytical data for this area.

Marsh Area: EPA has reviewed the SBCFI report that was submitted in March of this year. Four conclusions drawn by O'Brien from the study are:

- 1) The average bay water dissolved lead concentration exceeds the average fill pore water dissolved lead concentration.
- 2) Bay sediment lead concentrations are less than the 200 ppm lead background level that was chosen for use in the study.
- 3) Fill pore water dissolved lead levels are relatively low even in areas characterized by high total lead.
- 4) Fill pore water dissolved lead levels are consistently below the lead levels obtained by running bay water extraction tests.

The overall conclusion from the study is that the elevatedlead that occurs in "hot spots" (above the TTLC level) in the fill area is essentially immobile and, as such, is not dix IX) should be run on a representative number of samples. While a portion of this lead contamination may be attributable to contaminated debris being used as fill for this area in the 60's and early 70's, it is up to 0'Brien to demonstrate this contribution. It is also requested that 0'Brien explain why the sample collected at AB2 was not

analyzed. One of the main conclusions of the SBCFI report is that the average bay water dissolved lead concentration exceeds the average fill pore water dissolved lead concentration. The average for the fill pore water was arrived at, however, by including a large group of below-detection concentrations in the eastern portion of the sampled area that lie south of the "creek" discharge point. As this area of the fill is conceivably outside of the influence of fill contaminants, inclusion of these data points is probably not statistically sound, and results in an artificially low average fill pore water dissolved lead concentration. Additionally, the more highly elevated fill pore water dissolved lead concentrations (1.30, 0.64 and 0.43 ppm) are significantly higher than the maximum bay water dissolved lead concentration Thus, it is probably more likely that the fill (0.28 ppm). pore water is contaminating the bay water than vice-versa. As a final note on the SBCFI report, EPA is concerned that no bay water samples were collected in truly "open" waters (i.e., not contiguous to the shoreline). If a true background level for lead in bay water is being sought, samples should be collected from areas well off-shore.

ISD Groundwater Monitoring Workplan: While EPA agrees that any modifications to the existing groundwater monitoring system should be delayed until the submittal of the Hydrogeologic Assessment Report (HAR) Addendum, several improvements to the system will probably be required. following aspects relating to the current understanding of the site hydrogeology support this position: the upper aguifer is not defined; stratigraphic Zone B has not been demonstrated to be a laterally continuous aquitard; no monitoring wells have been placed in Zone B; despite being hydraulically upgradient from the impoundments, well MW-21 is probably contaminated; and, well MW-15, originally intended to be an upgradient well for Zone A, may be contaminated by the area previously occupied by the treatment The issues pertaining to the well MW-21 area and the probable need for a post-closure permit were discussed previously.

SWMUs from the RFA Report: Although 31 total SWMUs are listed in the RFA report, some of these units are being addressed under the CME Workplan, while others will not require further investigation. However, it is assumed that the Road Map report, which O'Brien has agreed to prepare,

Sincerely yours,

Chris Prokop
Chris Prokop
Geologist, EPA-Region IX

cc: Mitch Kaplan, DHS Patricia Barni, DHS

#### May 23, 1989

To: Michael James From: Sonia S. Low

Re: Corrective Action 3008(h) Order Regulatory Agencies

Meeting

Enclosed is the attendance sheet. The following are the minutes of the meeting:

#### I. ACME LANDFILL

1. The Regional Board (RB) does not want to be the lead for the implementation of the 3008 (h) Order.

- 2. WDR's has been adopted on May 17, 1989. This order covers the RCRA and the Non RCRA Units.
- 3. The Hydrological data that is required to be submitted in September 1989 as a part of the Groundwater Workplan implementation (GWI) will determine if further action is required. Acme's consultant requested an extension (Mid January 1990) for the submittal of the GWI report.
- 4. RB has no enforcement pending with Acme but S&E has civil (Consent Or(Ar) enforcement.
- 5. EPA is almost ready to approve the Closure Plan.
- 6. It is anticipated that the Post Closure Application is to be submitted by next year. This is covered in the CP.
- 7. Although EPA is strongly recommending RB to be the lead by offering fund, RB appears to be not interested. However, RB will be checking with their management and will contact DHS and EPA on their decision.

#### II. O' BRIEN

- Closure Plan for the RCRA closed pond was approved in September 1987. The facility has to submit a Post closure application, however, the DHS will not issue this permit by next year because of staff resources constraints.
- 2. EPA had an appeal meeting with O'Brien on May 19, 1989. EPA will take the lead on the O'Brien Corrective Order. The meeting focused on the O'Brien Workplan and the agencies noted deficiencies.
- 3. EPA will be writing two letters detailing what O'Brien has to do to comply with their requirements.

4. EPA is very interested on the "Marsh Study", ( off-site O'Brien believed to be lead (Pb) contaminated in the soil, and the adjacent Bay).

#### III. TOSCO CORPORATION

- 1. RB has issued WDR's ( #87-123 ) on September 16, 1989 [mimarily involving the closed surface impoundments, referencing the waste management units identified in the RFA report and requiring submittal of a Report of Waste Discharge for each units. This Order also indicates that it could be updated based on the submitted HAR and the findings of the new CME report.
- S&E has just completed CEI in May 1989.
- 3. The CME that is scheduled to be completed on July 24, 1989 will only covered the closed RCRA surface impoundments while the 3008 (h) order covers these units and all SWMU's. The two impoundments have been closed as RCRA landfills , therefore, a post closure permit will be issued in a later date.
- 4. RB will issue either # revised WDR's or CAO in December 1989 or January 1990. RB will incorporate their findings of the CME.
- 5. RB would nds be looking at the SWMU's until 1990.
- 6. RB suggested to develop a schedule of compliance and to hold off on the 3008(h) activities. RB has to concentrate on the interim corrective action on the free product recovery.
- 7. RB has a lot of concerns on the attachment I details such as community right to know, etc. Should the RB be the lead, EPA has to carry over the items that RB could not address.
- 8. S&E said that TOSCO has written request that the ISD be withdrawn (no wastes have been stored on site for longer than 90 days) since 1983 to both DHS and EPA. To date we have not responded to Tosco. S&E has documentation that TOSCO has only violated generator requirements. S&E has considered TOSCO as a generator for the wastes stored and a facility for the closed impoundments.
- 9. EPA will be talking to their legal personnel to determine how long extension of 3008 order hearing can be and whether this action is prudent environmentally.
- 10. EPA is recommending that the facility to provide a road map of what they have already done to satisfy portions of the 3008 order. Cross referencing information developed for any

units identified is acceptable.

#### IV. GENERAL ITEMS

- 1. Should the DHS or RB be the lead for these orders, EPA has to revise the orders that reflects the changes. At present the order is designed for EPA and the facility only per HWSA.
- 1. All facilities that were sent the corrective orders have requested appeal hearings.
- 2 Some of these facilities has met with EPA, some have been scheduled to meet EPA and some have not been scheduled.
- Compliance schedule of the corrective order from the date of appeal will be revised per agreement with and decision of EPA.
- 4. EPA said that the orders did not intent to require the facility to provide information in a format contained in the order. The facility can provide a road map discussing what the company have already done to satisfy the order. Cross referencing such as Closure plan in volume 1 on such date and was approved on such date, waste water treatments units in the report of discharge to the RB dated on such date, SWMU as referred in the SWAT to RB on such date, etc. Should some items are not applicable to the operations state so with justificatio, and if the work has not been done provide the proposals or workplans with compliance schedules.

PT-H



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

#### **REGION IX**

# 215 Fremont Street San Francisco, Ca. 94105

CERTIFIED MAIL NO. P 765 057 360 RETURN RECEIPT REQUESTED

In Reply T-2-4

Refer to: O'Brien Corporation

CAD005130455

81 MAR 1989

E. P. Daly Vice President The O'Brien Corporation 450 East Grand Avenue South San Francisco, California 94080

Dear Mr. Daly:

On November 17, 1987, the Environmental Protection Agency ("EPA") conducted an inspection of your facility pursuant to the Resource Conservation and Recovery Act ("RCRA"), 42 U.S.C. § 6901, et seq. Based upon this inspection and a review of available records for your facility, EPA has prepared the enclosed RCRA Facility Assessment ("RFA").

An RFA is part of the corrective action process under RCRA. Typically, EPA uses an RFA to determine if there has been a release of hazardous waste or hazardous constituents at a facility and to determine whether further investigation or corrective action is warranted. If further investigation or corrective action is necessary, EPA will either issue a corrective action order or include the corrective action conditions as part of the facility's RCRA permit. In those situations in which a facility with a corrective action order subsequently receives a RCRA permit, the requirements of the order are incorporated into the permit.

A review of the RFA for your facility and other information indicates that further investigation of releases of hazardous waste or hazardous constituents is necessary. Enclosed is an order requiring such investigation.

EPA recognizes that The O'Brien Corporation is conducting activities to investigate and/or remedy releases of hazardous waste from the facility. Specifically, EPA is aware that you have undertaken a study to evaluate the marsh area, and that you have submitted to State agencies a work plan designed to address the deficiencies noted in the 1988 California Regional Water

Quality Control Board (RWQCB) Compliance Monitoring Evaluation (CME) inspection report. The purpose of this order is to ensure that, pending issuance of a post-closure permit, The O'Brien Corporation investigates all releases of hazardous waste or hazardous constituents from the facility and determines the need for any further corrective action of those releases. By requiring such work pursuant to the enclosed order, EPA will be able to resolve issues regarding the need for corrective action for such releases at the facility now while investigations required by RWQCB or the California Department of Health Services (DHS) are proceeding.

EPA does not intend for this order to require actions that duplicate The O'Brien Corporation's current and planned investigative and corrective action work. Rather, the agency intends to require supplemental investigation of releases of hazardous waste or hazardous constituents from the facility where such releases are not being thoroughly investigated. In the Current Conditions Report required by this order, EPA expects The O'Brien Corporation to describe how current and planned investigative and corrective action work fulfills the requirements of this order and obviates the need for further work. The O'Brien Corporation's RFI workplan would then focus on releases of hazardous waste or hazardous constituents that need additional attention.

Attachments I and II of the order are scopes of work for the RFI and Corrective Measures Study (CMS). These scopes of work are written broadly to address all possible types of releases. The order identifies which portions of the scopes of work do and do not apply to your facility.

The Order will become final unless you make a written request for a hearing within thirty (30) days of your receipt of the Order. The Order contains further details on how to request a hearing. A copy of the hearing procedures is enclosed. The hearing procedures require that you submit a response to the order when you submit a request for a hearing.

The hearing procedures also require that a copy of the Order and supporting documentation be included in the administrative record and made available to the public. Since this Order was based, in part, on the RFA, which you have claimed as Confidential Business Information, the Order will be placed in the confidential portion of the administrative record until your claim of confidentiality is resolved.

Whether or not you request a hearing, you may request an informal conference in order to discuss the facts of the case or the scopes of work for the RFI and CMS. In addition, EPA is willing to negotiate a consent order under RCRA Section 3008(h) to replace this unilateral order. A request for an informal conference does not extend the thirty (30) day period during which a

written answer and request for a hearing must be submitted. The informal conference may be pursued simultaneously with the public adjucatory hearing procedure.

If you wish to request an informal conference, you should contact Kathleen Chovan of the Office of Regional Counsel at (415) 974-8063.

Sincerely,

Jeff Zelikson

Director

Hazardous Waste Management Division

Enclosures: Administrative Order and Attachments

RCRA Facility Assessment

Hearing Procedures

cc: Paul Blais, DHS-HQ (w/o encl)

Howard Hatayama, DHS TSCD Region 2 (w/o encl) Mitch Kaplan, DHS TSCD Region 2 (w/o encl) Steve Ritchie, RWQCB Region 2 (w/o encl) Seena Hoose, RWQCB Region 2 (w/o encl)

NOTICE: THIS ORDER CONTAINS

CONFIDENTIAL BUSINESS INFORMATION.

THIS ORDER AND THE INFORMATION WITHIN IT MAY NOT BE RELEASED

Note: (nder nxt atached 1/20/96

#### CERTIFICATE OF SERVICE

I hereby certify that the original of the foregoing Administraive Order was filed with the Regional Hearing Clerk, Region 9, and that a copy was sent, certified mail, return receipt requested, to:

E. P. Daly Vice President The O'Brien Corporation 450 East Grand Avenue South San Francisco, CA 94080

Date

Hazardous Waste Management Division

In Reply
Refer to: T-2-4
Facility: The
O'brien Corporation
ID#: CAD005130455

**5 NOV 1987** 

Mr. Don Mazzone
The O'brien Corporation
450 East Grand Avenue
South San Francisco, CA 94080

Dear Mr. Mazzone:

As a follow-up to your conversation on November 4, 1987, with Mr. Ron Leach of my staff, this letter is to confirm that a visual site inspection (VSI) is to be conducted at The O'brien Corporation by representatives from our RCRA implementation assistance contractor, A. T. Kearney, Inc. The site visit has been scheduled for November 17, 1987. Your cooperation in admitting and assisting the contractor representatives, our staff, and any State of California staff is appreciated.

Under the 1984 Hazardous and Solid Waste Amendments (HSWA), a RCRA facility assessment is required of The O'brien Corporation. The objective of this assessment is to determine whether or not releases of hazardous waste or hazardous constituents have occurred or are occuring at the site which require further investigation. This analysis will provide information to establish priorities for subsequent remedial investigations.

An integral portion of this assessment is a VSI of your facility to verify and determine the location of all "Solid Waste Management Units" (SWMUs). We are requiring that our contractor visit your facility for the purpose of a visual inspection of these SWMUs. During this site visit, no samples will be taken. The contractor may require the assistance of some of your personnel in reviewing solid waste flow(s) or previous disposal practices. This site visit is to provide the contractor a technical understanding of the present and past waste flows and handling/disposal practices. Photographs of each SWMU are to be taken to document the conditions of the facility and procedures used.

In preparation for the site visit, the contractor is required to identify any potential hazards at the site and prepare a specific safety plan, if necessary. The contractor will contact

CONCURRENCES					
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you by telephone in the near future to obtain specific information on the personal protection required and materials handled in each area of your facility. The contractor will also be sending you an agenda of inspection activities including a list of units to be visited.

Should you have any questions regarding this matter, please contact Mr. Ron Leach at (415) 974-7523.

Sincerely yours,

. . . . .

Karen Schwinn Chief, Enforcement Section Waste Programs Branch

cc: Paris Creenlee, DHS-NCCS
Patti Barni, DHS-NCCS
Seena Hoose, RWQCB-Region 2
Beth Levine, RWQCB-Region 2
Chris Nelson, A.T. Kearney, Inc.

# 2- Way Memo

Subject: RCRA Investigation of Fuller O'Brien Paint Co.

To : Philip Bobel, Chief

Toxics and Waste Management Division

Waste Management Branch T-2

B 423

FOLD

SLAIS sion B J.33

Level

**INSTRUCTIONS** 

Use routing symbols whenever possible.

SENDER (Originator of message):
Use brief, informal language.
Conserve space.

Forward original and one copy.

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Reply below the message, keep one copy, return one copy.

DATE OF MESSAGE

ROUTING SYMBOL

6-6-86

T - 3 - 2

SIGNATURE OF ORIGINATOR

TITLE OF ORIGINATOR

Field Investigator

d investigator

Enclosed is the report for the December 12, 1985, RCRA inspection at Fuller O'Brien Paint Company.

This facility is located immediately adjacent to the Bay. A few days before the site visit an unusually high tide removed a large portion of soil, damaging the south edge of the container storage area and exposing a wall of buried drums.

At the time of the inspection, this facility was in the process of clean closing its sludge ponds. CA DOHS is the lead agency on the pond closure. Note that CA DOHS changed the clean close allowable lead level from 50 PPB to 200 PPB.

The following violations were noted in the report: 265.14(b)(1)

265.31

265.33

265.176

From: Donn Zuroski T-3-2 thru: Kathleen Shimmin, Chief

Field Operations Branch T-3

DATE OF REPLY

ROUTING SYMBOL

SIGNATURE OF REPLIER

TITLE OF REPLIER

You are hereby required pursuant to the authority of \$3007 of RCRA, 42 U.S.C. \$6927, to report to EPA information regarding hazardous waste units subject to the HSWA loss of interim status provision. In particular, you are to submit the following information within 15 days:

- 1) For each RCRA land disposal unit at your facility, please confirm that the unit ceased accepting hazardous waste on or before November 8, 1985. Please provide the date when hazardous waste waste last placed in the unit.
- 2) Please indicate for any unit that lost interim status on November 8, 1985 if that unit is now accepting non-RCRA waste.
- 3) For each RCRA land disposal unit at your facility, state how the hazardous waste introduced into the unit before November 8, 1985 is now being managed. Also provide the approximate annual amount of waste that that was previously managed in the affected interim status unit(s).

Responding to the above information request will relieve your facility of its responsibility to respond to question 4 of the undated §3007 information request mailed to you in November 1985.

Please address all responses to the above questions to:

Michael T. Feeley RCRA Programs Section (T-2-1) U. S. Environmental Protection Agency 215 Fremont St. San Francisco, CA 94105

If you have any questions regarding the loss of interim status, please contact Judy Walker of my staff at (415) 974-8015.

Sincerely,

Harry Seraydarian Director, Toxics and Waste Management Division



#### UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

#### **REGION IX**

#### 215 Fremont Street San Francisco, Ca. 94105

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

O'BRIEN CORP. 450 EAST GRAND AVENUE SOUTH SAN FRANCISCO, CA 94080 RE: CAD005130455

Dear Hazardous Waste Facility Owner/Operator:

As you are aware, the Hazardous and Solid Waste Ammendments of 1984 (HSWA) (Public Law 98-616) included a provision which affected the regulatory status of all Interim Status Land Disposal Facilities. Section 213 of HSWA required all Interim Status Land Disposal Facilities to submit on or before November 8, 1985: 1) a statement certifying compliance with all applicable RCRA Ground Water, 2) a statement certifying compliance with all applicable RCRA financial requirements, and 2) a Part B permit application. Failure to comply with these requirements would result in the loss of interim status.

On November 8, 1985 your facility lost interim status for all affected land disposal units for the following reason(s):

- You failed to submit a statement certifying compliance with all applicable RCRA Ground Water requirements.
- You failed to submit a statement certifying compliance with all applicable RCRA financial requirements.
- You failed to submit a Part B permit application

If you have not already done so, you must immediately cease to place waste in any affected land disposal unit.

P 313 529 211

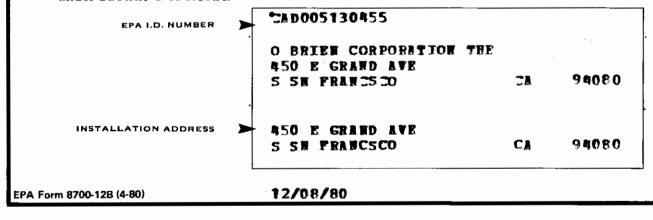
o Brien Corp





#### ACKNOWLEDGEMENT OF NOTIFICATION OF HAZARDOUS WASTE ACTIVITY (VERIFICATION)

This is to acknowledge that you have filed a Notification of Hazardous Waste Activity for the installation located at the address shown in the box below to comply with Section 3010 of the Resource Conservation and Recovery Act (RCRA). Your EPA Identification Number for that installation appears in the box below. The EPA Identification Number must be included on all shipping manifests for transporting hazardous wastes; on all Annual Reports that generators of hazardous waste, and owners and operators of hazardous waste treatment, storage and disposal facilities must file with EPA; on all applications for a Federal Hazardous Waste Permit; and other hazardous waste management reports and documents required under Subtitle C of RCRA.





#### UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

**REGION IX** 

215 Fremont Street San Francisco, Ca. 94105

June 19, 1985

Richard Wilcoxon, Director Toxic Substances Control Division DOHS 714 P Street Sacramento, CA 95814

Dear Mr. Wilcoxon:

A major goal of EPA and the state hazardous waste agencies over the next several months will be the taking of appropriate actions on RCRA ground water monitoring facilities not in compliance with their ISD and 40 CFR 265 Subpart F. After November 8, 1985, those facilities which cannot certify compliance with the ground water monitoring (GWM) requirements lose their interim status and must cease accepting hazardous waste in land disposal units. EPA is committed to taking needed actions and to coordinating with States. To facilitate that coordination, we have attached a list of facilities showing the next anticipated step in the evaluation/enforcement process.

Please note that a number of the facilities are listed as having no wells or inadequate well systems. For those facilities, notice is hereby given pursuant to Section 3008(a)(2) of RCRA. In some cases action by your agency appears particularly appropriate, and we have shown a "Next Step" and listed "CA DOHS" as the agency. We would appreciate your immediate review and commitment to the listed actions wherever possible. Exchanging draft actions will insure proper coordination. Where draft actions are not received by EPA in 30 days, EPA may initiate appropriate action. EPA will view only a Director's Order or a Determination of violation by DOHS, or a Clean-Up and Abatement Order by the Water Boards as the appropriate State enforcement actions. NOV's or administrative letters will not suffice for this purpose.

The "Next Step" has been deleted for those facilities where EPA is actively considering enforcement action as it constitutes enforcement confidential information. John Masterman is being provided a copy of the full list marked as "Enforcement Confidential."

Thank you for your help in this important matter. I look forward to your response at the earliest possible date. Your staff may contact Phil Bobel [(415) 974-8119)] or his staff with questions.

Sincerely,

Harry Seraydarian

Tom Bailey
John Masterman
Jim Allen
Dwight Hoenig
Angello Bellomo
John Adams
Paul Smith, DOHS-HQ
RWQCB 1 - 9

RECORDS SEPARATOR PAGE

RECORDS SEPARATOR PAGE

# RECORDS SEPARATOR PAGE

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**RECORDS SEPARATOR PAGE** 

## Cherokee Environmental Risk Management

May 2, 2000

Mr. Tom Kelley US EPA, Region 9 75 Hawthorne Street San Francisco, CA 94105-3901



5445 DTC Parkway Suite 900 Englewood, CO 80111 (303) 771-9200 (303) 771-9270 (Fax)

RE: Response to the Final Decision and Response Comments

Dear Mr. Kelly:

Per Julie Anderson's Letter dated April 26, 2000, I am responding to the request for Cherokee's written confirmation of willingness to implement the approved remedy. After review of the Final Decision and Response to Comments, Cherokee approves and agrees to implement the remedy.

Cherokee in conjunction with Henshaw and Associates (Cherokee's Environmental Consultant) is in the process of completing the Corrective Measures Implementation Plan (CMIP). Cherokee will most likely submit the CMIP for your review within the next two (2) weeks, well within the sixty (60) day requirement.

If you have any other questions or comments, please feel free to contact me at (303)771-9200.

Best Regards,

Michael Bertrand Project Manager

Cc: Jerome Crowley



July 7, 1998

Mr. Thomas Kelly United States Environmental Protection Agency Region IX 75 Hawthorne Street San Francisco, CA 94105

RE: Meeting To Discuss The O'Brien Corporation Property 450 East Grand Avenue South San Francisco, California

Dear Mr. Kelly,

This letter is to confirm the following meetings to be held to discuss The O'Brien Corporation property at 450 East Grand Avenue in South San Francisco with:

- Ms. Katherine Baylor and you on July 9, 1998 at 2:00 p.m. at your office in San Francisco.
- Mr. Jerome J. Crowley, Jr. and you from The O'Brien Corporation on July 28, 1998 at 10:00 a.m. at your office.

Henshaw Associates, Inc. appreciates you making time meet with us. Please do not hesitate to contact me if you have any questions.

Respectfully submitted,

Michael Harrison, P.E. Environmental Engineer

CC: Mr. Jerome J. Crowley, Jr.

G:\Files\2067-98.doc

7/07/98



**Environmental Engineering Services** 

April 27, 1998

Michael Lozeau San Francisco BayKeeper Bldg. A, Fort Mason Center San Francisco, CA 94123

Re:

Stormwater Management Update 450 East Grand Avenue South San Francisco, California

Dear Mr. Lozeau:

The following stormwater management update information is intended to inform Baykeeper of the ongoing stormwater management activities at The O'Brien Corporation property (Property) located at 450 East Grand Avenue, South San Francisco, California. Henshaw Associates, Inc. (Henshaw) has been retained by The O'Brien Corporation to perform the stormwater management activities as described in the Stormwater Pollution Prevention Plan and Monitoring Program (the Program, June 18, 1997 by Applied Environmental Strategies) and required by the Consent Decree (Case No. C-96-1300 EFL).

Activities conducted under the Program consist of:

- Inspection of stormwater management facilities including berms, ditches, and the South Property stormwater retention pond;
- Collection of samples of North Property runoff during storm events;
- Collection of samples of South Property stormwater retained in the stormwater retention pond prior to discharge;
- Discharge of stormwater retained in the South Property stormwater retention pond;
   and
- Monitoring of rainfall frequency and amounts.

#### **Property Inspections**

Participation in the Stormwater Pollution Prevention Plan and Monitoring Program by Henshaw began in late October of 1997. On October 27, 1997 Ms. Patti Houle of Applied Environmental Strategies and Henshaw completed a site walk during which stormwater management practices and issues of concern were discussed. The site was very dry at this point in the season, reflecting the October rainfall total of 0.68 inches. The only portion of the property that appeared wet was on the north property, proximate to the naturally occurring spring. At the time of the site walk, the berms, trenches, and the stormwater retention pond were in good order.

Following the transition site walk in October, property inspections were initiated. Henshaw personnel accomplished site inspections on the following dates: 10/27/97, 11/13/97, 11/26/97, 12/8/97, 12/9/97, 1/7/98, 1/12/98, 1/15/98, 1/20/98, 1/29/98, 2/2/98, 2/3/98, 2/12/98. Inspection G:\Files\1917-98.doc 4/27/98

**Environmental Engineering Services** 

March 17, 1998

Mr. Thomas Kelly United States Environmental Protection Agency-Region IX 75 Hawthorne Street San Francisco, California 94105

Dear Mr. Kelly:

Following our March 6, 1998 conversation, which included Kathy Baylor, Henshaw Associates, Inc. has completed the Eastern Property discrete sampling at The O'Brien Corporation property at 450 E. Grand Avenue, South San Francisco. As agreed upon, grab groundwater samples were collected and analyzed for semivolatile organic compounds (SVOCs) by EPA Method 8270, volatile organic compounds (VOCs) by EPA Method 8240, and dissolved Priority Pollutant Metals by EPA Method 6000/7000. As discussed, the samples collected for metals analysis were filtered in the laboratory with 5 micron filters, and the SVOC samples were decanted by the laboratory prior to analysis.

During field activities, several modifications to the September 22, 1997 workplan submitted by Applied Environmental Strategies on behalf of The O'Brien Corporation were made. These modifications were made in response to conditions encountered in the field, and in consultation with Kathy Baylor.

- The dimensions of the eastern property boundary would not allow seven samples to be taken spaced at 120-foot intervals. Based upon allowable working distances and the intention to appropriately characterize the eastern edge of the property, samples were attempted at approximately 70 foot intervals;
- Due to low groundwater yield and collapsing borehole conditions, 1-inch slotted casing was used within the borehole to construct temporary sampling points. Casing was used to complete temporary sample points for the rest of the sampling effort, and was removed prior to borehole abandonment;
- Due to low yields from the temporary sample points, and the downward progression
  of the tide and corresponding groundwater surface, temporary sample points EP-W4,
  EP-W5, and EP-W6 were installed to below 16, 18, and 17 feet below ground surface
  respectively;
- Groundwater samples were obtained from the groundwater surface, and no additional effort was required to obtain interface samples; and
- A final sample location was attempted within the boundary of the stormwater retention pond. After repeated attempts spanning two days, the temporary sample point (EP-W6) failed to yield sufficient groundwater to allow analysis for SVOCs or metals.

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## HA Henshaw Associates, Inc.

As you were notified, a heavy sheen and evidence of oily product were encountered at the approximate location where EPA requested an additional groundwater sample; approximately due east of the north eastern corner of the existing ICI Paints manufacturing facility.

Henshaw Associates appreciates the cooperative manner in which EPA has participated in this sampling activity. Please contact me with any questions or if I can provide further information.

Sincerely,

Michael Harrison, P.E. Environmental Engineer

cc. Mr. Jerome J. Crowley, Jr.

Ms. Kathy Baylor

NHS



RATECH Resources P.O. Box 397 San Lorenzo, California 94580-0397

March 12, 1994

Ms. Josephine Chien
U.S. Environmental Protection Agency
Region IX
75 Hawthorn Street
San Francisco, California 94105-3901

Dear Ms. Chien:

This letter is provided by RATECH Resources, on behalf of Ms. Patricia Houle at Fuller-O'Brien Paints (O'Brien), as a response to the U.S. Environmental Protection Agency (EPA) letter dated February 16, 1994. The written responses provided in this letter are based on discussions between representatives of O'Brien, RATECH Resources, and EPA, at your offices on March 4, 1994.

A Statement of Understanding is provided below in which the current status of the Health Risk Assessment (HRA), and the documentation to be provided to EPA is stated. The responses provided in this letter correspond exactly to the order of the comments received in the EPA letter of February 16, 1994

#### STATEMENT OF UNDERSTANDING

Based on discussions held at EPA offices on March 4, 1994, the following verbal agreement was reached by all parties:

- 1. This letter constitutes a response to the EPA letter dated February 16, 1994, and therefore no additional modifications will be made to the Health Risk Assessment Workplan (Workplan), prepared in October, 1993.
- 2. The HRA will be divided into a minimum of two phases.
  - a). The first phase of the HRA will consist of:
     Generation of a data base of all the data that includes all historic and recently collected data for the Solid Waste Management Units (SWMUs), and other areas of interest defined in the Workplan, and an additional area requested for consideration by the California Environmental Protection Agency (Cal/EPA) Department of Toxic Substances Control (DTSC).

Data management whereby the data will be evaluated for applicability and appropriateness of use in the HRA. This will include a review based on age of data, prevalence analysis, and a Chemical Toxicity Screening, if necessary. These methods will result in a list of the Compounds of Interest (COI) for each Area of Interest, that will

tonsustration !!

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be included for further analysis in the HRA.

- Dimensional or spatial understanding of the data using graphical/plotting techniques, and ∕ iii generation of a site map indicating all sampling locations.
- Exposure Pathways Analysis to identify the specific pathways to be evaluated in the √ iv second phase of the HRA.
- Development of the Toxicity Factors to be used for the COI identified using the methods / V outlined above.
- ✓ vi Full documentation of all the above information, in report format, will be provided to EPA for review and comment prior to beginning the second phase of the HRA.
  - The second phase of the HRA will consist of: **b**).
    - Completion of the HRA process through the Risk Characterization phase.
  - ii Full documentation of the entire HRA process. This will be in report format and will include all the information provided in both the first and second phase of the HRA. The draft report will be provided to EPA for review and comment before the final report is prepared.

#### RESPONSE TO COMMENTS

#### 1. Purpose and Objectives of the Health Risk Assessment.

The objectives of the risk assessment are to identify whether or not each of the SWMUs or Areas of Interest poses a potential threat to human health, and to assist the risk manager in determining if there is a need for corrective action. This objective will be stated in the report prepared as part of the first phase of the HRA.

# 2. Definition of Approach to be Used in Health Risk Assessment. De not addressed

The SWMU/Area of Interest approach has been verbally approved by EPA. The definition of each Area of Interest was based on past activity at the site, and data/information indicating that a potential release had occurred in a specific location. The basis for the HRA will be clearly stated in the report so that the reader will be made aware of the location-specific information provided by the HRA.

want area that RA will cover marked maerial map.

The data base and site map that will be generated as part of the first phase of the HRA will provide sufficient detail to develop an understanding of the spatial extent of the impacts to soil and groundwater.

#### **/3**. Section 2.0, Data Sources, pages 3-4.

All data will be tabulated in a data base for data management purposes. Upon treatment of the data as described above, no data will be excluded from the HRA process without written rationale in the HRA reports provided as part of both the first and second phases of the HRA.



1/4. Section 4.1, Exposure Pathway Evaluation, pages 5-6.

> An exposure pathway evaluation will be completed as part of the first phase of the HRA. This analysis will be diagramed so that the inclusion or exclusion of each pathway can be followed with corresponding, specific rationale.

√5. Section 4.2.1, Background Concentrations, pages 6-7.

> All risk estimates will be generated using the concentrations of the COI detected in each SWMU or Area of Interest, therefore no background samples will be collected for the HRA. This will be stated in the reports provided as part of both the first and second phases of the HRA.

Section 4.2.2, Prevalence Analysis, page 7. Section 4.2.3, Chemical Toxicity Screening, pages 7-8.

The data base generated for the first phase of the HRA will be used to identify data that will be The transfer and whether it has been superseded by more recently detailed to its compounds detected following this first review by age is manageable, no additional screening will nd bun be completed. If, however, the list of compounds is unreasonable, further analysis by compound prevalence or Chemical Toxicity Screening will be performed. This will be fully documented in the reports provided as part of both the first and second phases of the HRA.

Section 4.3, Exposure Scenarios, pages 8-10.

At a minimum the HRA will include an industrial exposure scenario. Additional information is currently being reviewed with respect to the zoning restrictions placed on O'Brien's property, and the adjacent properties. A business decision with respect to the assumption of liability (based on potential remedial action for non-residential risk estimates) will be made by O'Brien based on the following conditions:

- EPA is able to review the HRA based on the industrial scenario only.
- If building restrictions or covenants are already in place.
- If the available information indicates that current and future zoning is commercial/industrial.

This will be stated in the reports provided as part of both the first and second phases of the HRA.

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√ 8. Section 4.4.1, Estimation of Exposure Point Concentrations - Soil, pages 10-11.

The industrial scenario will be developed that includes an appropriate depth of excavation. The depth will be based on that typically used for utility trenching, and the excavation completed for the newly constructed building on the O'Brien property. All rationale for excavation depth will be documented in the reports provided as part of both the first and second phases of the HRA.

9. Section 4.4.2. Estimation of Exposure Point Concentrations - Particulates in Air, pages 11-12.

In the event that area-specific PM10 information is not available from the Bay Area Air Quality Management District, or other appropriate agency, the State of California particulate emission factor default for PM10 will be used. The following equation will be used to calculate the exposure point concentrations for particulates in air:

Concentration in air (mg/cu.m) = Concentration is soil(mg/kg) \* Total Suspended Particulates (PM10 expressed as mg/cu.m) \* 1E-6(kg/mg).

10. <u>Section 4.5.1, Absorption Factors, pages 14-15.</u>

In the event that additional absorption and bioavailability factors are used to modify constituent intakes, careful review of the toxicity factors will be made to ensure that these parameters are not "double factored."

Also, if it is determined that route to route extrapolations are required, the conversions will be made from existing toxicity data using appropriate conversion conventions. All conversions will be documented in the report prepared as part of the first phase of HRA. The report will be submitted to EPA for review and approval of all absorption and bioavailability factors, and route-to-route extrapolations, prior to continuing with the second phase of the HRA in which the toxicity factors will be subsequently used.

If you have any additional questions, please feel free to call me at your convenience at 510.782.1192, or Ms. Patricia Houle, the Environmental Manager at Fuller-O'Brien Paints at 415.871.3106.

Sincerely,

RATECH RESOURCES

Gillian I. Marks MPH, REA

Senior Partner

c: Ms. Patricia Houle, Fuller-O'Brien Paints, So. San Francisco, California

#### ATTACHMENT

#### EPA'S COMMENTS ON THE HEALTH RISK ASSESSMENT WORKPLAN FOR THE O'BRIEN CORPORATION, DATED OCTOBER, 1993

Purpose and Objectives of Health Risk Assessment. 1.

The workplan should state the purpose and specific objectives of the risk assessment. It should also indicate how the results of the risk assessment will be used. - 4 for dead leads

2. <u>Definition of Approach to be Used in Health Risk Assessment.</u>

O'Brien intends to conduct a separate risk assessment for each area of concern, rather than a single risk assessment for the facility as a whole. The areas of concern are: Warehouse Area, MW-21 Area, Former Tank Farm/Eastern Property, Former Solvent Still Area, Breakwater Area.

- The workplan should clearly define this approach and explain the rationale for this approach.
- In aft-I who b. Each area of concern should be rigorously defined. doing so, the workplan should account for the fate and transport of released chemicals and indicate additional areas of potential impact. Each area of concern and area of potential impact. [potential impact should be clearly identified on an aerial → map of the facility, which should be included as part of the workplan.

c.) The workplan should indicate all steps the O'Brien Corporation will take to ensure that all future prospective buyers of the property will be fully informed of the nature agreement by phase implications. is summer by some bests. Rose presented by non-summare some net known that DB mill be this

Section 2.0, Data Sources, pages 3-4.

All available data for each area of concern should be considered for use in the risk assessment, and should be included in data summary tables in the workplan. The tables should clearly indicate what data will be included for analysis in the risk assessment. Rationale should be provided for all data that will be omitted from use in the risk assessment.

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4. Section 4.1, Exposure Pathway Evaluation, pages 5-6.

Exposure pathway analysis should be included in the workplan. Potential areas of impact resultant from the fate and transport of the chemicals should also be considered in the evaluation. Inclusion of the exposure pathway analysis at this stage will facilitate future review of the risk assessment report, as well as provide better focus for all immediate levels of efforts.

5. Section 4.2.1, Background Concentrations, pages 6-7.

O'Brien intends to omit specific metals from the risk assessment analysis based on a statistical comparison between data obtained from the areas of concern and areaspecific background concentrations.

Were the light medical a. The criteria used for defining area-specific background concentrations must be indicated.

- b. If a difference of means test determines that specific metals will be omitted from risk assessment analysis, the concentrations of these metals in a given area of concern should be compared to established "levels of concern", e.g., "EPA Region IX Preliminary Remediation Goals", in order to estimate the risk presented by background metals concentrations.
- c. The workplan should indicate that if background metals concentrations cannot be defined for a given area of concern, the risk will be calculated based on concentrations of the constituents present.
- Section 4.2.2, Prevalence Analysis, page 7.
  Section 4.2.3, Chemical Toxicity Screening, pages 7-8.

These two sections should be deleted, as further screening of the data set beyond comparison with background concentrations is not necessary. Prevalence analysis and chemical toxicity screening are designed to limit lists of chemicals of concern for sites with large numbers of detections of chemicals with similar physical properties. The O'Brien Corporation is not such a site. The use of these tests will be neither cost efficient nor will it significantly simplify the final report.

7. Section 4.3, Exposure Scenarios, pages 8-10.

O'Brien plans to consider only industrial exposure scenarios

in this risk assessment. Both industrial and residential exposure scenarios should be considered in this risk assessment. Information obtained from calculations that utilize residential exposure scenarios can serve as important reference points for making the most cost effective and informed decision for remedial action, should remedial action be warranted.

# 8. Section 4.4.1, Estimation of Exposure Point Concentrations - Soil, pages 10-11.

For scenarios 2 and 3, the maximum excavation of concern should be defined and supported by reviews of the current building practices in the area, as well as take into consideration special site requirements. Reference to Reynolds et. al. is not sufficient and does not consider local building practices.

# 9. <u>Section 4.4.2, Estimation of Exposure Point Concentrations - Particulates in Air, pages 11-12.</u>

Respirable particulates in air should be estimated by using the PM10 determination for the area, and using the health protective assumption that concentrations in the soil are the same for the dust. This will incorporate site specific information and a health protective assumption to supply bounds on the estimate of risk due to this pathway.

#### ∠ 10. Section 4.5.1, Absorption Factors, pages 14-15.

The use of absorption factors is only appropriate for dermal exposures. Since the toxicity factors for oral and inhalation exposures are calculated as applied doses, this correction is inherent in the determination and does not need to be evaluated. Therefore, section 4.5.1.1 should be deleted.

Via Certified Mail No. P104 937 827 In Reply Refer to: H-4-4 (CAD 005 130 455)

February 16, 1994

Ms. Patricia Houle Environmental Manager Fuller O'Brien Paints 395 Oyster Point Blvd., Suite 350 South San Francisco, CA 94080

Re: <u>EPA'S Comments on the Health Risk Assessment Workplan for the O'Brien Corporation, dated October, 1993.</u>

Dear Ms. Houle:

The U.S. Environmental Protection Agency (EPA) has completed its review of the Health Risk Assessment Workplan prepared by Ratech Resources for the O'Brien Corporation. EPA's comments on this document are enclosed. Please submit a revised workplan within 30 days of your receipt of this letter.

If you have any questions, or would like to arrange a meeting to discuss these comments, please contact Josephine Chien of my staff at (415) 744-2045.

Sincerely,

Larry Bowerman, Chief Corrective Action Section

Attachment

cc: Patti Barni, Cal-EPA (DTSC), Region 2 Dan Stralka, US EPA, H-9-3

#### **MEMORANDUM**

To: Josephine Chien (H-4-4)

From: Daniel Stralka, Ph.D. (H-9-3)

Regional Toxicologist

Subject: Meeting Notes on O'Brien Paints

Date: March 4,1994

This meeting was at EPA and attended by Patty Houle from O'brien, Gillian Marks their risk assessment contractor, to discuss our comments on the Risk Assessment Workplan from October 1993. The meeting was productive and several points were discussed for clarification.

- 1. Introductory remarks will specify the scope of the risk assessment to demonstrate the areas that were addressed.
- 2. Data sources will include all data and an evaluation of that data for inclusion in the risk assessment. The rationale for data rejection will be presented in the document. This process is ongoing and will include the Phase II RFA data.
- The exposure pathway analysis will be presented in a draft of the RI which will include the data evaluation. This document will be presented for comment before the full RA is completed.
- 4. Due to the difficulty of determining background for fill, a PRG screen will be used for inorganics to focus the attention on those elements that present a risk. If a metal presents a risk then the spatial analysis of the data could be used to put its concentration into perspective as naturally occurring or not.
- 5. A prevalence test will not be used until after the spatial data evaluation has grouped the data in an appropriate manner.
- 6. A long discussion on the merits of calculating the residential scenario for this site took place. Other options discussed were the demonstration of existing covenants that would restrict the land use, e.g. restrictions due to the airport flyway. O'Brien will research and present their decision in the pathway analysis.
- Exposure scenarios based on the construction scenario will be justified based on the the local building construction. This will primarily be based on the recent construction at O'Brien.
- 8. The inhalation of soil particulate will be calculated using the soil particulate emission factor of  $4.63 \times 10^9 \text{ m}^3/\text{kg}$ .
- 9. Some confusion exists on the definition of the dermal pathway. I believe that is semantics and that the toxicity factor for inorganics will be corrected appropriately.
- 10. Gillian will send a copy of the Cal Leadspread model in which she has modified the data presentation. She will use area specific inputs for the air and water defaults.

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SENT BY

Consulting Engineers

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#### **COMMENTS:**

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MASTERFLEX

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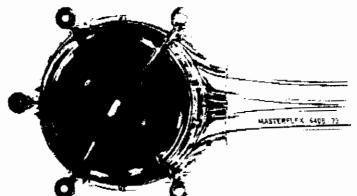


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LOADING THE TUBING IN THE HIGH-CAPACITY PUMP HEAD MASTERFLEX INSTRUCTIONS



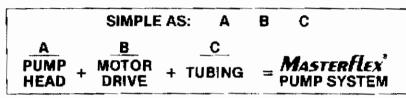
MASTERFLEX-Reg TM Cole Parmer Instrument Company

# GENERAL COMMENTS ABOUT MASTERFLEX<sup>®</sup> PUMP SYSTEMS

There are three (3) components to every Masterflex System:

- A. Pump Head
- B. Mator Drive
- C. Tubina

The simplicity of this system makes the pumps easy to use and also easy to order. Familiarity with these components help insure satisfaction with your Masterflex System.



**NOTE:** The pump head is supplied with all High-Capacity Drive Systems.

#### A. PUMP HEAD

The patented Masterflex pump head and the three rollers provide the peristaltic action to propel fluids through the tubing.

#### **B. MOTOR DRIVE**

The drive (which provides the power to rotate the rollers in the pump head) is available in many different configurations to fit your particular application.

#### C. TUBING

Make sure the tubing is compatible with the media you are pumping. Refer to the chemical compatibility in the general catalog. Be certain the temperature and pressure are within the specified range of the pump head.

Masterfiex tubing is precision-extruded to insure top performance with Masterflex heads. Other commercial tubing will not meet or perform to our specifications.

The pump heads are available in two materials: Lexans for general applications, and polyphenylene sulfide (PPS) for more corrective applications.

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#### INTRODUCTION

The high capacity Masterflex tubing is a carefully engineered peristaltic pump that accepts a continuous length of tubing to and from a system for contamination-free pumping. The only material the fluid touches is the inside diameter of the tubing itself, which can be readily cleaned and disinfected with liquid agents without requiring pump disassembly.

The Masterflex pump is completely self-priming. The pump features a highly efficient 3 roller rotary assembly within a uniquely designed full visibility polycarbonate housing. All parts are ruggedly built and rotate on ball bearings for minimum wear of components and maximum tubing life. All bearings are completely sealed and are lubricated for life.

The pump can be run at up to 650 RPM and an output of up to 120 GPH can be obtained. Liquids can be pumped to 25 psi continuous and 40 psi intermittent. Vacua of up to 20 inches of mercury may be obtained.

Wear or fatiguing of the tubing section within the pump head due to compression and expansion is normal. The usable life of the tubing will vary depending upon the tubing material selected, liquid, gas or vacuum being pumped, the system pressure in the pump and the speed of the pump. With all other conditions remaining the same for a fluid pressure of 0 psig to 15 psig at the outlet of the pump.

It is recommended that a sample of tubing be subjected to immersion tests in the fluid to be pumped to check the compatibility of the fluid with the tubing. If such tests indicate incompatibility, our engineering staff can assist you in selecting special tubing materials. Also, the pump should be run under actual conditions to determine the tubing life under those conditions.

#### TYPES OF HEADS AVAILABLE

Slan	dard heads (0.	C033 gals/revo	High-flow heads (0.0054 gals/revolution)					
Materials*	Pow Rate	Head c	al. no.	Malerials*	flow Rate	Head cat. no.		
	at 650 rpm	first	Add-on	hsg/iota	at 650 rpm			
PG/GFS	2	7019-00	7019- <b>20</b>	PC/CRS	3 6 000	7819-25		
PC/SS	2.1 gpm	7919-01	701 <del>9</del> -21	PC/SS	3.5 gpm	7019-26		
PFS/CAS	24	7019-40	7019-42	PPS/CRS	25	7019-35		
PPS/SS	2.1 gpm	7019-41	7019-43	PPS/SS	3. <b>5 g</b> pm	7019-51		

<sup>\*</sup> PC = Polycarponate: PPS = Polychenylene suitide. CRS = Coto-rolled steet: SS = Stamess sizel.

#### CONTENTS OF HIGH CAPACITY PUMP HEAD PACKAGE

	Masterflex Pump Head Silicons Tubing												
	Mounting Hardware Package												
	Instruction Booklet	-		-	-							-	1
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#### LOADING THE TUBING





- Remove the five (5) mounting boits on the pump head and then remove the plastic front half of the pump head. Rotate the rotor until one roller is in the 12 o'clock position, with the shaft slot in the position shown in the photo.
- NOTE: Be sure the pump rotor is pushed back against the back half of the pump head.
- 2) Place tubing in the left port of the pump head (as shown in the photo), slide the tubing key onto the rotor, pushing down on the key until it locks in place on the rotor shaft. In this position, the key should be forcing the tubing into the reaction area of the plastic back half of the pump head.



3) Push the tubing key firmly against the rotor and rotate the tubing key counterclockwise (guide the tubing up and in the right port of the pumpheed an year see turning the tubing keys with the tubing is fully caded in the pumpheed. Plannove the tubing key. Pull gently on the tubing and guide the tubing into the 2 ports.

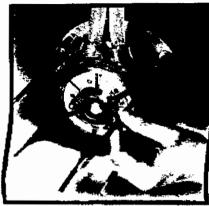


4) Replace the front half of the pump nead to the back half by aligning the matching alignment bins on the pump halves. Be careful not to pinch the tubing between the pump halves. Fester the five (5) mounting bette, westers and time refu.

NOTE: Finger tighten only

#### MULTI-CHANNEL PUMPING

Load the tubing in the pump head that is mounted to the drive as described on page 5, except to NOT use the five (5) mounting bolts, washers and wing nuts that come with the system for single pump heads. Instead, slide the five (5) long mounting studs that are supplied with the add-on head, through the five (5) holes in the pump head. Secure with washers and are supplied with the side on head, through the five (5) holes in the pump head.





Load the tubing in the add-on pump head as shown on page 5. In this case, the tubing is installed in the pump on a workbench or other hard flat surface. The pump head must be supported on the mounting bosses with wooden blocks or other hard spacers so the pump shaft does not touch the work bench. Side the add-on pump head on the five (5) mounting studs. The shaft tang of the add-on pump head iff example peat the plastic; should be facing the shaft that other pump.

Using the square end of the key, insert it into the slot in the shaft and rotate the shaft until it interlocks with the first pump head. Then install the washers and wing nuts, FINGER TIGHTEN ONLY.

#### **MASTERFLEX® TUBING FORMULATIONS**

**Use Masterflex®** tubing only. Masterflex® tubing is precision-extruded and optically inspected to ensure top performance with all Masterflex® pump heads. **Other commercial** tubing will not meet or perform to our specifications.

**rubing for the Masterflex<sup>3</sup>** system is manufactured in six formulations to **neet most** pumping requirements. All Masterflex<sup>6</sup> tubing is precision**partuded to stringent** specifications.

noces from the following formulations:

TYGON\* (R-3603) — a law-cost, non-corrosive tubing for general apolications in the raporatory. Excelent for rapport curroing

TYGON\* SPECIAL F-4040-4 — formulated to transport invertigations in a best suited for pastime, fuels love, and rubhosants

TYGON\* FOOD B4444X:— designed specifical. For use in bumbing food products. Mests USDA and FDA standards.

PTON Inc. included the mean call easier against comes insight of wents. This fluorelestome: has the shortes; tubing life.

SILICONE — meets USDA and FDA standards. Silicone has the widest temperature range and the longest life. It can withstand pump head squeezing action at 200 rpm for up to 450 hours before losing its elastic memory.

C-FLEX<sup>TV</sup> THERMOPLASTIC-ELASTOMER — a new high-performance Masterflex<sup>P</sup> tubing with exceptional chemical resistance. C-Flex-is a cost-efficient, long-life tubing.

NORPRENE<sup>9</sup> — a new long-life Masterflex<sup>9</sup> tubing that is resistant to heat and ozone with excellent vacuum characteristics.

NORPHENE\* FOOD — FDA approved for use with food products.

Silicone, C-Flex, Norprene and Viton tubing can be AUTOCLAVED by standard procedures:

- High speed instruments (flash) autoclave place on muslin cloth or sterilizing paper in clean, open tray. Sterilize 10 minutes at 270°F (30 psi) (132°C) (2 kg/cm²).
- Standard gravity autoclave wrap in muslin cloth or sterilizing paper and place in a clean, open tray. Sterilize 30 minutes at 250 °F (15 psi). (121 °C), (1 kg/cm²).
- Prevacuum high temperature autoclave wrap in mustin cloth or sterilizing paper and place in a clean, open tray. Sterilize at normal cycle (30-55 minutes) at 250°F (121°C).

Tygon can be sterilized by two methods:

- Using one of a number of germicides or gases, based on ethylene oxide in a gas sterilizer.
- Steaming to a maximum of 250°F at 15 psi for 30 minutes and then cooling at 150°F in a dry heat for 2½ hours maximum.

Tygon, Normene — Reg TM Noston Company
Whan — Reg TM E 1. DuPont Nemours & Company
CFlax — TM Concept Inc

#### FLOW CHARACTERISTICS

Typical flow curves for Tygon and Silicone tubing are given for different speeds in Figure 1 and 2. Flow characteristics of Tygon Food and Viton tubing are similar to Silicone tubing. The termination point of a flow characteristics curve does not necessarily indicate that the tubing had failed at that point. The flow data were determined under these conditions: Inlet pressure—Atmospheric; outlet pressure—5 psig; circulant—water; temperature—72°F.

For a given curve, the pump was run continuously without any inbetween stoppings and the speed of the driving motor was adjusted and kept constant against any variations.

The flow rate would remain approximately the same for a fluid pressure of 0 psig to 15 psig at the pump outlet. Above 15 psig pressure, the flow rate would decrease with an increase in pressure. The pressure in the system is produced by the pump itself and by external obstacles such as straight and reducer tubing connectors, flow valves, etc. A new section of tubing in the pump will provide more pressure initially but will decline after a few hours of running in the pump. Silicone and C-Flex tubing will generate less pressure than Tygon tubing. The higher the speed, the more pressure generated. A connection very close to the outlet or two connections very near each other will create more pressure than properly spaced connectors. A reducer connector will create more pressure than a straight connector if a tubing connector is used very near to the outlet side of a pump, it is recommended that the connection be clamped; otherwise the internal pressure may push the joint apart.

#### RUPTURED TUBING

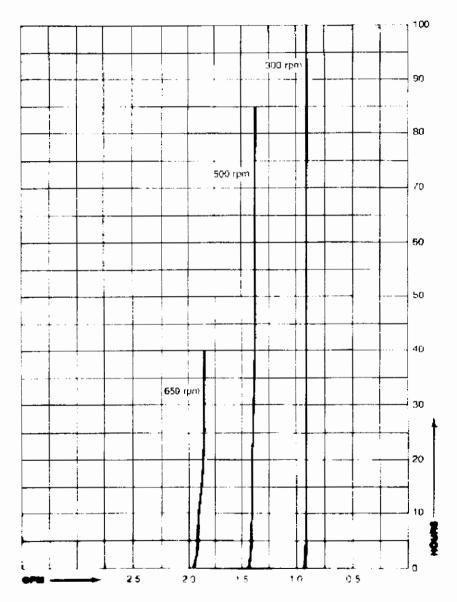
It is possible that over-fatigued tubing may rupture within the pump head. Depending on the fluid being pumped, the pump parts may be contaminated or damaged and may require cleaning or replacement. The plastic pump head material is polycarbonate or polyphenylene sulfide. The rotor assembly, except for bearings, is plated steel. The bearings in the rotor assembly and pump head are high carbon chrome steels with seals of synthetic rubber.

#### PUMP MAINTENANCE

Bearings within the pump head and rotor assembly are permanently lubricated and require no maintenance. The pump head should be periodically disassembled and cleaned, particularly if the tubing within the head is ruptured during pump operation. While the head is disassembled, inspect all parts for obvious damage or wear and replace where recessary.

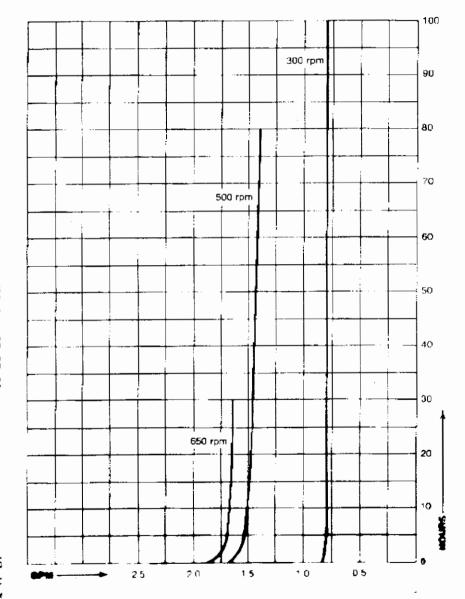
#### FIGURE 1

#### TYPICAL FLOW CHARACTERISTICS OF TYGON TUBING



#### FIGURE 2

#### TYPICAL FLOW CHARACTERISTICS OF SILICONE TUBING



Page 10

#### **MASTERFLEX® TUBING APPLICATIONS SUITABILITY**

#### Suitablilty Table:

Data given below are general and based on average applications. We recommend you subject a sample of the tubing to an immersion test in the fluid to be pumped, particularly if you are working with hazardous materials. We assume no responsibility for tubing failure in specific applications.

Series Number	Туре	Service Life' @ 0 pei 550 rpm	Temperature Range	Oxygen Permeability*
6411-	Silicone	100 hrs	-80° to +500°F (-62° to +260°C)	315,000
6412-	Viton	50 hrs.	-10° to +400°F (-23° to +205°C)	374
6409-	Tygon (H-3603)	50 hrs.	-50° to +165°F (-29° to + 74°C)	120
6401-	Tygon Special	50 hrs.	+ 10° to + 180°F (-12° to + 83°C)	120
6419-	Tygon Food	40 hrs.	0° to + 180°F (-18° to + 83°C)	120
6424-	CFtex	150 hrs.	60° to + 230°F (-50° to + 110°C)	24 <del>5</del> 0
6404-	Norprene	1000 +	60° to +275°F (50° to +135°C)	90
6402-	Norprene Food	1000 +	60° to +275°F (50° to +135°C)	90

'Approximate life in pump head subjected to stress of perista tic action.

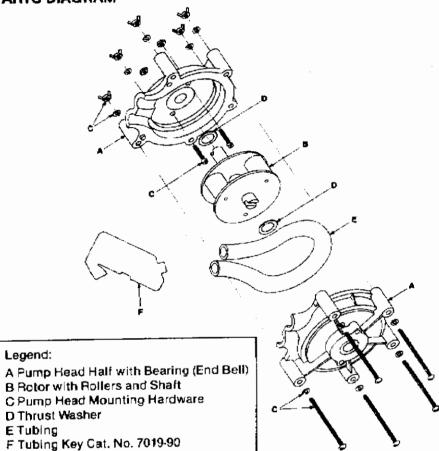
Tubing life is inversely proportional to pump speed; halving the speed should double the life.

Tubing life is inversely proportional to pump speed; halving the speed should double the life 'cc-mil/100 inches! day, atmosphere. Figures are approximate.

#### Suitability Guidelines:

- 1. Silicone exceptionally blocompatible, because it contains no toxic leachable plasticizers. Meets USDA, FDA and USP Class VI standards. Silicone tubing remains flexible through the widest temperature of any Masterflex® tubing. 80° to +500°F (-62° to +260°C). Excellent elastic memory allows the longest tubing life, 825 hours and 100 rpm, 150 hours at 550 rpm, except for elze 18 which has a 70 hour life at 550 rpm. Autoclavable. Translucent white.
- 2. Viton fluoroelastomer exceptional resistance to corrosives, solvents, and oils at elevated temperatures. Temperature range from -10° to +400°F (-23° to +204°C). Has the shortest life of any Masterflex<sup>3</sup> tubing, 165 hours at 100 rpm, 30 hours at 500 rpm. Autoclayable. Opaque black.
- 3. Tygon (R-3603) soft, clear, low-cost tubing for general laboratory applications. Non-toxic, non-aging, and non-oxidizing. Excellent for vacuum pumping. Femperature range from -50° to +165° to +74° C). Service life: 275 hours at 100 rpm, 50 hours at 560 rpm. Autoclavable at 250°F (121° C), 15 psi for 30 minutes. Dry heat at no more than 150°F (66°C) for 2 to 2½ hours. Transparent
- 4. Tygon special (F-4040-A) specially formulated to transport hydrocarbons. Suitable for gasoline, kerosene, heating oits, cutting compounds, and glycol-based coolants. Minimum extractability; will not adulterate pumped fluid. Should not be used with high concentrations of strong acids or alkelles. Temperature range from + 10° to + 180° F (-12° to + 83°C). Service life: 275 hours at 100 ipm, 50 hours at 550 ipm. Autoclave at 250° F (121°C), 15 psi for 30 minutes. Dry heat at no more than 150° F (66°C) for 2 to 2½ hours. Transfucent yellow.
- 5. Tygon food (8-44-4X) designed specially for pumping food products. Non-toxic. Meets USDA and FDA standards. NSF listed. Will not effect taste or odor of products conveyed through it. Bone is extremely smooth (smoother than stainless steel) so: twon't trap particles which might harbor bacteria. Excellent wetting properties permit flush-cleaning and complete drainage. Unaffected by all commercially available sanitizers. Temperature range from 0 to 180°F (-18° to +83°C). Service life: 220 hours at 100° pm, 40 hours at 550° pm. Autoclave at 250° F (121°C), 15 psi for 30 minutes. Dry heat at no more than 150°F (68°C), for 2 to 2½ hours. Transparent.
- 6. C-Flex\*\* Thermoplastic electroner low-cost tubing with elastic characteristics and chemical compatibility similar to silicone. Excellent biocompatibility, contains no toxic materials. Meets FDA standards, surpasses USP Class VI requirements. Temperature range from 40° to + 230 °F +60° to + 110 °C). Long service life; 255 hours at 160 rpm, 150 hours at 550 rpm except for size 16 which has a 70 hour life at 550 rpm. Sterilizable by ethylene pudds, garwina radiation, or suloclave. Opeque white.
- 7 Respective superior He, shows no sign of weekening or crecking after years of use. Substantial cost serings. Resistant to heat and ozone Excellent vecuum characteristics Remarkable consistency of flows over life of tabing.
- 8. Superme<sup>TM</sup> Food Chade FDA approved Superior IIIs. Substantial cost savings. Resistant to heat and ozone. Excellent vacuum cheracteristics. Remerkable consistency of flows over life of tubing

#### PARTS DIAGRAM



#### REPLACEMENT PARTS

#### Housings

Legend:

**E** Tubing

Sten	derd Head		High-Hew Head					
Replacement for	Housing material*	Cet. mo.	Replacement for pump head model	Housing material	Cal. no.			
7016-00, 20	PC	7016-76	7019-25	PC	7018-74			
70 10-01, -21	PC	7010-70	7019-26	PC	7010-75			
7016-40 42	PPS	7010-71	7019-36	PPS	701970			
7019-41 -43	PPS	7819-73	7019-51	· PPS	7049-77			

#### **REPLACEMENT PARTS (continued)**

#### Rotor assemblies

First	need rotors	)	Add-on-head rotors					
Replacement for pump head model	Hotor material*	Çat no.	Replacement for pump head model	Rotor material*	Cat. no.			
7019-00, -25 7019-35, -40	CRS	7019-80	7019-2042	CRS	7019-82			
7019-01, -41 7019-26, -51	SS	7019-83	7019-21, -43	SS	7019-B5			

#### Mounting hardware

Cat. No.	No. of heads	Material*
7019-95	One	SS
7019-96	Two	SS

<sup>\*</sup> PC - Posycarbonate: PFS = Polypherylene sulfide. CBS = Cofd rotted steet; SS = Stainless

#### MASTERFLEX® TUBING REORDERING GUIDE

The tubing listed below has been manufactured to our exact dimensions and subjected to quality control checking by an optical comparator for compatibility with Masterflex® pump heads. If other tubing is inserted into a Masterflex® pump head, malfunctions such as tubing failure, tubing slippage, decreased pressure, or vacuum deficiency may occur.

Before ordering tubing, we recommend that you consult the Tubing Applications Sultability Table (page 11) for guidelines to determine the appropriate tubing for your requirements.

#### TUBING FOR HIGH-CAPACITY PUMPS

Tubing Cat. No.	Tubing ID	Tubing Cat. No.	Tubing ID	Tubing Formulation	General Application	Use With
6409-26	0.250"	6408-73	D.374"	Ty <b>g</b> on*	General Purpose	
6401-26	0.250	6401-73	0.374"	Tygon Special	Hydrocarbons	
5419-28	0.250"	8419-73	0.374"	Tygon Food	Food industry	HA
8411-26	0.250"	6411-73	D.374"	Silicone	Biocompatibility	Std.
6424-26	0.250"	6424-73	0.374"	C-FLEX*	Biocompatibility	Pump
6412-26	0.250"	6412-73	0.374"	Viton <sup>5</sup>	Solvents/corrosives	Heads
6404-26	0.250**	6404-73	0.374"	Norprene:	Long Life	1
6402-26	0.250"	8402-73	0.374"	Norprene Food	Food Industry	
6485-26	0.250"	6465-73	0.374"	PharMed <sup>TM</sup>	Biocompatibility	

Tubing	Tubing	fubing	General	Use
Cat. No.	ID	Formulation	Application	With
9483-82 9495-88 9411-81 9484-82	0.500" 0.500" 0.500 0.500	Silipone	Food industry Biocompatibility Biocompatibility Biocompatibility	Heeds

<sup>\*</sup> For dual channel bumbing use only OFLEX of silicone tubing

#### **TUBING FOR HIGH CAPACITY PUMPS (continued)**

Fitting cal. no.	Description	Material	Dimensions
8450-20 6456-31 6458-40	Straight connector	High-density polyethylene	%" tubing ID %" tubing ID %" tubing ID
6450-21 6450-40 8450-80	Pipe adapter	High-density polyethylene	¼" NPT(M)x¼" hose barb ¾" NPT(M)x¾" hose barb ½" NPT(M)x½" hose barb





Tubing with -73 cal. no. suffixes fit %" hose barb



6402-82, 6411-81, 6424-82, and 6485-82 fil ½" hose barb

Tubing shown actual size with nominal dimensions.

#### TROUBLE SHOOTING GUIDE

Problem	Possible Reason	Solution		
Dues not prime	Undersized lubing thickness	Use correct size tubing or add a few drops of fluid being pumped in the tubing within the pump.		
Does not pull vacuum	Undersized tubing thickness	Use correct size tubing or add a few drops of vacuum off in the tubing within the pump.		
Fubling fails too soon.	1) Incompatibility with the fluid being pumped	1) Test other lubing materials		
	Jammed roller in the rotor assembly	Check all 3 rollers; if frozen roller is found, replace the rotor.		
	3) Too much eccentricity in the system	3) Check mounting, coupling shaft seating, etc.		
	Oversized tubing thickness	4) Use proper dimension tubing.		
	5) Bad tubing material	5) Return to vendor.		
Tubing moves incide the pump	1) Jammed roller in the rotor assembly	Check all 3 rollers; if irozen roller is found, replace the rotor.		
	2) Undustrable lubrication of inside of pump	2) Clean both oursp halves and rotor.		
	3) Undersize tubing O.D.	3) Use proper dimension tubing.		

#### WARRANTY

The warranty card must be properly filled out and returned. The manufacturer warrants this product to be free from defects in material and workmanship for period as noted on the warranty card. If repair or adjustment is necessary and has not been the result of abuse or misuse within warranty period, please return, freight prepaid, and correction of the defect will be made without charge (see note on return of items). Out of warranty products will be repaired for a nominal charge.

#### RETURN OF ITEMS

Authorization must be obtained from our Customer Service Department before returning Items for any reason. When applying for authorization, please include data regarding the reason items are to be returned. A 15% restocking charge will be made on all returns resulting from customer errors in ordering.

For your protection, items being returned must be carefully packed to prevent damage in shipment and insured against damage or loss. We will not be responsible for damage resulting from careless or insufficient packing.

Prices and specifications subject to change without notice.

SENT BY:

10-26-93 : 4:53PM :

HARZA KALDVEER→

415 744 1044:#10/15

MASTERFLEX\*
HIGH CAPACITY PUMP DRIVES
CATALOG NUMBERS
7549-30, -40, -50, -60

Cole-Parmer Instrument Co. 7425 N. Oak Park Avenue Miles, Ninois 50714

708 647-7800 1-80-323-43-0 4-1280-323-43-0 Edition 2790

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#### **GENERAL DESCRIPTION**

This variable speed pump drive incorporates a high-torque permanent magnet D.C. motor and solid-state speed control housed in a rugged aluminum cabinet.

The motor is extremely quiet, has long brush life and is permanently lubricated for trouble-free continuous operation.

The speed control offers excellent line and load regulation resulting in constant motor speed over varying line voltage and torque fluctuations.

Flow direction is reversible and the "soft-start" circuit produces smooth, gradual acceleration to speed when power is applied.

Control and motor operation are protected by two fuses. Both are "normal blow" type 3AG which are readily available. One fuse protects the speed control and is accessible on the rear panel. The second fuse protects the motor armature and is accessible by removing the top cover of the unit.

Catalog Number	Motor R.P.M.	Power Requirements
7549-30	100-650	100 to 130 VAC 50-60 Hz
-50		
7549-40	100-650	200 to 250 VAC 50-60 Hz
-60		
	OPERATION	i

Operation of this variable speed drive is very straightforward. The first step to insure trouble-free operation is to plug the drive into the appropriate grounded electrical outlet. Never operate this drive without a good electrical ground!

Next, load the tubing into the pump head as follows:

- Hemove the five slotted pump mounting screws and remove complete pump head (with coupling attached to the pump shaft) from mounting plate.
- 2. Without removing coupling from pump, separate by prying front half of pump head from back half.
- 3. Load tubing on rotor. Install the tubing by positioning it around the rollers and rotating the roller assembly with one hand (a acrewdriver placed in the slotted shaft may be used for this purpose) while depressing the tubing sheed of the rollers with the thumb of the other hand. Apply gentle inward pressure on the roter as it is rotated. Continue this retation until the tubing is sested within the head cavity.

NOTE: In the loaded position, 1/2 or more of the tubing width should sit within the pump head cavity.

- 4. Push front and back halves of pump together.
- 5. Sight thru mounting plate for position of coupling on motor. Line up pump coupling (with screwdriver inserted into slot in front of pump) by turning screwdriver. After coupling halves are seated, rotate complete pump until mounting holes are in line. Secure with five pump mounting screws.

*NOTE:* If coupling is removed from pump, the motor housing has to be removed to position coupling on pump shaft.

Once the tubing is loaded and the pump reinstalled on the drive, turn the drive on by placing the FORWARD-OFF-REVERSE switch to the direction of required flow. When the switch is in the FORWARD position, the discharge side of the pump will be on the right. Placing the switch in the REVERSE position will change the discharge to the left. The red power indicator lamp will be lit whenever the switch is in the forward or reverse position.

#### 7549-38 and 7549-40

The flow rate can be adjusted by setting the linear front panel speed control from 1 to 10. The working speed range of the pump drive is 100 to 650 RPM, therefore a knob setting of 5 would result in an output speed of approximately 325 RPM or half the maximum attainable flow.

#### 7549-50 and 7549-60

This unit can be operated by either the front panel speed control or an external 4-20 mA signal. Positioning of the switch located on the rear panel marked INT/EXT control selects the mode of operation desired. When the switch is in the INT position, the front panel speed control regulates motor speed. In the EXT position, motor speed is controlled by an external 4-20 mA signal. This 4-20 mA signal is fed into the drive circuitry through the jack located just below the INT/EXT switch. Wiring from the signal source can be connected to the mating phone plug which is Switchcraft type 250 two conductor phone plug. Signal polarity should be observed when wiring the plug to insure proper drive operation. The positive side of the line should be wired to the tip terminal of the plug and the negative side to the shank terminal. The shorter of the two terminals in the plug is the tip or positive terminal. The drive has been calibrated to shut off at a 4 mA input and to run at a full speed of approximately 650 RPM at 20 mA.

NOTE: The FORWARD-OFF-REVERSE switch is special in that it incorporates a built in mechanical anti-plug feature. When going from forward to reverse or vice versa, hand pressure on the toggle must be released momentarily in the OFF position in order to continue changing directions. This momentary delay allows time for the motor to slow down, thus preventing damage to the motor and control caused by high surge current.

#### MULTI-CHANNEL PUMPING

Under certain conditions, a second head can be mounted in tandem with the first. This, in effect, would double the volume of one solution being pumped or allow for pumping of two different solutions simultaneously. The following matrix should be used to determine if two pump heads can be used in your specific application. The use of two pump heads when not recommended, could cause serious damage to both the motor and speed control circuitry. Refer to the replacement parts section toward the end of this manual for the catalog and part numbers of the required add-on pump and mounting hardware.

#### Pump Head Capacity Rating

		Nu	mber o	f Head	s
	Silicone	2	2	1	1
Tubing	C-Flex	2	2	1	1
Туре	Tygon	2	1	1	1
	Viton	2	1	1	1
		0	10	20	25
		Back	Back Pressure (P.S.I		S.I.)

#### **PUMP HEAD DESCRIPTION**

The high capacity Masterflex tubing pump is a carefully engineered peristattic pump that accepts a continuous length of tubing to and from a system for contamination-free pumping. The only material the fluid touches is the inside diameter of the tubing itself, which can be readily cleaned and disinfected with fluid agents without requiring pump disassembly.

The Masterflex pump is completely self-priming. The pump features a highly efficient 3 roller rotor assembly within a uniquely designed, full visibility polycarbonate housing. All parts are ruggedly bullt and rotate on ball bearings for minimum wear of components and maximum tubing life. All bearings are completely sealed and are lubricated for life.

The pump can be run at up to 650 RPM and an output of up to 120 GPH can be obtained. Liquids can be pumped to 25 psi continuous and 40 psi intermittent. Vacuum of up to 20 inches of mercury may be obtained.

Wear or fatiguing of the tubing section within the pump head due to compression and expansion is normal. The usable life of the tubing will vary depending upon the tubing material selected, liquid, gas or vacuum being pumped, the system pressure in the pump and the speed of the pump. With all other conditions remaining the same, the tubing life will remain approximately the same for a fluid pressure of 0 psig to 15 psig at the outlet of the pump.

It is recommended that a sample of tubing be subjected to immersion tests in the fluid to be pumped to check the compatibility of the fluid with the tubing. If such tests indicate incompatibility, our engineering staff can assist you in selecting special tubing materials. Also, the pump should be run under actual conditions to determine the tubing life under those conditions.

#### **MASTERFLEX® TUBING FORMULATIONS**

Use Masterflex® tubing only. Masterflex® tubing is precisionextruded and optically inspected to ensure top performance with all Masterflex® pump heads. Other commercial tubing will not meet or perform to our specifications.

Tubing for the Masterflex® system is manufactured in six formulations to meet most pumping requirements. All Masterflex® tubing is precision-extruded to stringent specifications.

Choose from the following formulations:

TYGON® (R-3603) — a low-cost, non-corrosive tubing for general applications in the laboratory. Excellent for vacuum pumping.

TYGON® SPECIAL (F-4040-A) — formulated to transport hydrocarbons. It's best suited for gasoline, fuels, oils, and lubricants.

TYGON® FOOD (B-44-4X) — designed specifically for use in pumping food products. Meets USDA and FDA standards.

VITON® — for exceptional chemical resistance against corrosives and solvents. This fluorelastomer has the shortest tubing life.

SILICONE — meets USDA and FDA standards. Silicone has the widest temperature range and the longest life. It can withstand pump head squeezing action at 200 rpm for up to 450 hours before losing its elastic memory.

C-FLEX<sup>TM</sup> THERMOPLASTIC-ELASTOMER — a new high-performance Masterflex<sup>®</sup> tubing with exceptional chemical resistance. C-Flex is a cost-efficient, long-life tubing.

NORPRENE® — a new long-life Masterflex® tubing that is resistant to heat and ozone with excellent vacuum characteristics.

NORPRENE® FOOD — FDA approved for use with food products.

Silicone, C-Flex, Norprene and Viton tubing can be AUTOCLAVED by standard procedures:

- 1. High speed instruments (flash) autoclave place on muslin cloth or sterifizing paper in clean, open tray. Sterifize 10 minutes at 270 °F (30 psi), (132 °C) (2 kg/cm²).
- 2. Standard gravity autoclave wrap in muslin cloth or sterilizing paper and place in a clean, open tray. Sterilize 30 minutes at 250°F (15 psl), (121°C), (1 kg/cm²).
- 3. Prevacuum high temperature autoclave wrap in muslin cloth or sterilizing paper and place in a clean, open tray. Sterilize at normal cycle (30-55 minutes) at 250 °F (121 °C).

Tygon can be sterilized by two methods.

- Using one of a number of germicides or gases, based on ethylene oxide in a gas sterilizer.
- 2. Steaming to a maximum of 250°F at 15 psi for 30 minutes and then cooling at 150°F in a dry heat for 2½ hours maximum.

Tygon, Norprene — Reg TM Norton Company Viton — Reg TM E. I. DuPont Nemours & Company C-Flex — TM Concept Inc.

#### **MASTERFLEX® TUBING APPLICATIONS SUITABILITY**

#### Sultability Table:

Data given below are general and based on average applications. We recommend you subject a sample of the tubing to an immersion test in the fluid to be pumped, particularly if you are working with hazardous meterials. We assume no responsibility for tubing failure in specific applications.

Series	Туре	Ser	ervice' femperature		Oxygen	
Number	i	100 rpm	550 rpm	Runge	Permeability*	
6412	Siscone	625 hrs	150 h/s³	-80° to -500°F (-82° to -260°C)	315,000	
6412	Viton	165 hrs	30 h/s	-10° to -400°F (-23° to +205°C)	374	
6409	Tygon (R-3603)	275 hrs	60 h/s	-50° to +165°F (-29° to +74°C)	120	
6401	Tygon Special	275 hrs	50 hrs	+ 10° to + 180° F   - 12° 10 + 83°C	120	
6419	Tygon Food	220 hrs	40 hrs	0° to + 180° F   - 18° to + 63°C	120	
6424	C:Flex	825 hrs	150 hrs²	- 50° to + 230° F   - 50° to + 110°C	2.450	
6404	Norprene	5000 +	1000 +	- 60° to + 275°F (-50° to + 136°C)	90	
6402	Norprene Food	5000 -	1000 +	- 90° to - 275°F (-50° to + 135°C)	90	

'Approximate life in pump head subjected to stress of per-staffic action.

Tubing life is inversely proportional to pump speed; halving the speed should couble the life

'co-mili100 inches' day, atmosphere. Figures are approximate.

\*Except for size 18 tubing which has a 70 hour life at 550 rpm

#### Suitability Guidelines:

- 1. Siticone exceptionally biocompatible, because it contains no toxic leachable plasticizers. Meets USDA, FDA and USP Class VI standards. Silicone tubing remains flexible through the widest temperature of any Masterflex® tubing,  $-80^{\circ}$  to  $+500^{\circ}$ F ( $-82^{\circ}$  to  $+260^{\circ}$ C). Excellent elastic memory allows the longest tubing life, 825 hours at 100 rpm, 150 hours at 550 rpm, except for size 18 which has a 70 hour life at 550 rpm. Autoclavable. Translucent white.
- 2. Viton fluorelestomer exceptional resistance to corrosives, solvents, and oils at elevated temperatures. Temperature range from = 10° to +400°F (= 23° to + 204°C). Has the shortest life of any Masterilex<sup>st</sup> tubing, 165 hours at 100 rpm, 30 hours at 500 rpm. Autoclavable. Opaque black.
- 3. Tygon (R-3803) soft, clear, low-cost tubing for general laboratory applications. Non-toxic, non-aging, and non-oxidizing. Excellent for vacuum pumping. Temperature range from −50° to + 185° F ( − 45° to + 74°C). Service life: 275 hours at 100 rpm, 50 hours at 550 rpm. Autoclavable at 250° F (121°C), 15 psl for 30 minutes. Dry heat at no more than 150° F (66°C) for 2 to 2½ hours. Transparent.
- 4. Tygen special (F-4040-A) specially formulated to transport hydrocarbons. Suitable for gasoline, kerosene, fleating oils, cutting compounds, and glycol-based coolants. Minimum extractability; will not adulterate pumped fluid. Should not be used with high concentrations of strong acids or alkalles. Temperature range from + 10° to + 180° F (- 12° to + 83°C). Service life: 275 hours at 100 rpm, 50 hours at 550 rpm. Autoclave at 250° F (121°C), 15 pai for 30 minutes. Dry heat at no more than 150° F (66°C) for 2 to 2½ hours. Translucent yellow.
- 5. Tygon food (8-44-4X) designed specially for pumping food products. Non-toxic. Meets USDA and FDA standards. NSF listed, Will not affect taste or odor of products conveyed through it. Bora is extremely smooth (smoother than stainless steel) so if won't trap particles which might harbor becteria. Excellent wetting properties permit flush-cleaning and complete drainage. Unaffected by all commercially available sanitizers. Temperature range from 0 to 180 °F (- 18 to 83 °C). Service life: 220 hours at 100 rpm, 40 hours at 550 rpm. Autoclave at 250 °F (121 °C), 15 psi for 30 minutes. Dry heat at no more than 150 °F (65 °C), for 2 to 2½ hours. Transparent.
- 6. C.Flex\*\*\* thermoplastic elastomer low-cost tubing with elastic characteristics and chemical compatibility similar to silicone. Excellent biocompatibility, contains no toxic materials. Meets FDA standards, surpasses USP Class VI requirements. Temperature range from 60° to + 230°F ( 50° to + 110°C). Long service life; \$25 hours at 100 rpm, 150 hours at 550 rpm except for size 18 which has a 70 hour life at 550 rpm. Steritizable by attaylors oxide, gamma addiation, or successes. Opeque white:
- 7. Compress superior life, shows no sign of weakening or cracking after years of use. Substantiat cost savings. Posistant to heat and ozone. Excellent vacuum characteristics. Remarkable consistancy of flows over the of tubing.
- 6. Neutrons T Find Breds FDA approved Superior (fe. Substantial cost savings Resistant to heat and ozone. Excellent vacuum characteristics. Remarkable consistency of flows over life of tubing.

6

#### REPLACEMENT PARTS

PUMP DRIVE	7549-30	7549-50	7549-40	7549-60
Motor	E 1401 1	E-1401-1	E-1401-2	E-1401-2
Brushes (2)	A-31640R	A-3164CFI	A-3164CR	A-3164CR
Speed Control Board	B-2289-2	B-2093-1	B-2290-3	B-2093-2
Signal Isolator		B-2374		B-2374
FwdOff-Rev. Switch S.A.	B-2108	8-2108	B-2108	B-2108
4-20 mA Switch		B-1084-54		B-1084-54
4-20 mA Jack		A-2117		A-2117
Fuse (Arm & Line) (-30, -50 5 Amp -40, -60 3 Amp)	B-1115-4	B-1115-4	<b>B</b> -1115-33	B-1115-33
Fuseholder	A-1089	A-1089	A-1089	A-1089
Coupling	B-2038	B-2038	B-2038	B-2038
Knob	B-1083-32	B-1083-32	B-1083-32	B-1083-32
Foot	A-2855	A-2855	A-2855	A-2855

PUMP HEAD	CATALOG NUMBER
Standard Head	7019-00
Add-on Head	7019-20
Standard Hardware (1 pump)	7019-95
Add-on Hardware (2 pumps)	7019-96
Thrust Washer (all pumps)	7019-99
Tubing Key	7019-90

#### **MAINTENANCE**

#### PUMP DRIVE

The speed control circuit has solid-state components which do not require servicing. A tubing rupture may result in a motor overload which could cause some electrical parts to fail.

Exact motor brush and commutator life will depend on the speed and the number of pump heads. Brushes should be inspected every six months or 2000 hours, whichever occurs first. Replace when less than 0.300" long. The commutator should be periodically inspected and cleaned if necessary. If preventive maintenance is not performed, excessive commutator wear or 'bridging' between commutator segments will cause excessive current through the controller circuit.

#### PUMP HEAD

Bearings within the pump head and rotor assembly are permanently lubricated and require no maintenance. The pump head should be periodically disassembled and cleaned, particularly if the tubing within the head has ruptured during pump operation. While the head is disassembled, inspect all parts for obvious damage or wear and replace where necessary.

#### WARRANTY

The Cole-Parmer Instrument Company warrants the product to be free from defects in material and workmanship for the period noted on the warranty card. If repair or adjustment is necessary and has not been the result of abuse or misuse within the warranty period, please return, freight prepaid, and correction of the defect will be made without charge.

For your protection, items being returned must be carefully packed to prevent damage in shipment and insured against possible damage or loss. Cole-Parmer will not be responsible for damage resulting from careless or insufficient packing.

Out of warranty products will be repaired for a nominal charge.

#### RETURN OF ITEMS

Authorization must be obtained from our Customer Service Department before returning items for any reason. When applying for authorization, please include data regarding the reason the items are to be returned. A 15% restocking charge will be made on all unauthorized returns.

#### **TECHNICAL ASSISTANCE**

Technical information and advice on the use of the products in specific applications may be obtained. Modifications can be made to adapt the unit to special customer applications. Contact the Engineering Department for information.

The Cole-Parmer Instrument Company reserves the right to make improvements in design, construction and appearance of our products without notice.

AH

# MITTELHAUSER corporation

2401 Crow Canyon Road, Suite 100 San Ramon, California 94583 (415) 743-0335

November 5, 1991

Mr. Chris Prokop U.S. Environmental Protection Agency Region IX 75 Hawthorne Street San Francsico, California 94105

Subject: Uptake Biokinetic Model for The O'Brien Company

Dear Chris:

Enclosed please find a pre-paid floppy disk mailer and an additional envelope for the narrative instructions on the Uptake Biokinetic Model. I appreciate you sending these items to me and I assure you that I will return them before the end of this month.

I thank you for your cooperation, and await receipt of the model.

Sincerely,

Gillian I. Marks MPH, REA

October 14, 1988 88-01229.18

The O'Brien Corporation 450 E. Grand Avenue South San Francisco, California 94080

Attention: Ms. Patricia L. Houle

Subject: WORK PLAN ADDENDUM - Tidal Marsh Sediment

Quality Investigation

Dear Ms. Houle:

Persuant to your recent conversation with Ms. Seena N. Hoose of the Regional Water Quality Control Board - San Francisco Bay Region (RWQCB), this letter provides our recommendations for the evaluation of sediment transport in the marsh area immediately south of the O'Brien property. The purpose of this monitoring is to evaluate the possible occurence of significant sediment accumulation or erosion during the forthcoming rainy season of 1988 - 1989.

Measurement of sediment accumulation/erosion will be performed by topographic elevation survey along four transects established across the marsh. The locations of the transects will coincide with transects which will be established for the collection and analysis of sediment samples as described in the subject Work Plan. The transect locations will be established by driving four foot long fence posts into the ground at the margin on each side of the marsh. These fence posts will serve as permanent benchmarks to assure that the marsh profiles are determined at the same locations over the period of this study.

During each marsh profile event, a graduated line will be fixed between the fencepost benchmarks and topographic elevations will be determined at sufficient intervals to enable preparation of a detailed profile across the marsh. Vertical elevation control will be provided by a California licensed surveyor to a vertical accuracy of 0.01 feet. The elevation profiles along each of the four transects will be performed on a monthly basis through April 1989. Upon completion of the profiles, a report will be prepared summarizing the results of this task for your submittal to the RWQCB in May 1989.

October 14, 1988

88-01229.18

The O'Brien Corporation

Attention: Ms. Patricia L. Houle

Subject: Work Plan Addendum - Tidal Marsh Sediment Quality

Investigation

Page 2

As always, please do not hesitate to contact us if questions arise on the above.

Sincerely,

The MARK Group

Engineers and Geologists, Inc.

Dea March

Robert J. Karnauskas, P.G., P.HG.

Associate

N. Dean Marachi, Ph.D.

Principal

RJK/

cc: Seena N. Hoose - RWQCB

### Woodward-Lyde Consultants

October 18, 1985 900234

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Mr. Howard Hatayama
Department of Health Services
Toxic Substance Control Division
2151 Eerkeley Way, Annex 7
Berkeley, California 94704



Subject: Results of Analysis of Soil and Liquid Samples from Fence Line Pits at the Fuller O'Brien Paint Plant

#### Gentlemen:

In accordance with a request of the O'Brien Corporation, we enclose copies of the laboratory report on the results of analyses performed on subject samples. The sampling and analyses were requested by Ms. Elmore and Ms. Barni at a meeting at the site on August 15, 1985 and confirmed in their letters of August 21, 1985 and August 29, 1985, respectively. The samples were collected August 20, 1985 at locations as indicated in a sketch prepared by WCC staff at the time of the August 15, 1985 site meeting.

Copies of the map indicating the sampling locations, the field notes of the sampling team, and the chain-of-custody forms accompanying the samples are included with this submittal. In summary, the sampling locations were as follows:

- 4 soil samples from the east pit
- 2 soil samples from the west pit
- 2 soil samples from each of three locations outside the fence
- l soil sample from a small pit near the north end of the former east solar evaporation pond

It is noted that the last sample in the above list was not included in the sampling plan adopted at the August 15, 1985 site meeting. This sample was added to the list by WCC when excavation in the area encountered a material of different appearance than anything previously encountered at the site.



Mr. Howard Hatayama October 18, 1985 Page Two

In addition to the above listed soil samples, liquid samples were collected from the bottoms of the east and west pits, respectively.

Also, as requested by Ms. Elmore and Ms. Barni, we are in the process of preparing a Plan of Investigation for the areas generally encompassing the areas sampled and reported in the enclosed reports of analytical results. We have been waiting for those results in order to develop a proposed analytical program and now expect to be able to complete the Proposed Plan of Investigation for submittal to the agencies by October 31, 1985.

Please advise if you need additional information.

Sincerely,

M. B. Bennedsen

m & Bennedon

M. B. Bennedsen Project Manager

MBB:rm 0880r\*

Enclosure

CC: E. P. Daly, O'Brien Corporation
M. Burdine, O'Brien Corporation

DEPARTMENT OF HEALTH SERVICES

OFFICE FOR CA SADIA

October 8, 1985 Certified # 718 743 070

Mr. E. Daly The C'Brien Componition 450 E. Grand Ave. South San Francisco, CA 94080

Subject: Surface impoundment closure cleanup level

modifications and the completion of

closure requirements

Dear Mr. Daly:

As discussed in the September 10, 1985 meeting between the Department and representatives of O'Brien Corporation, the Department has agreed to reevaluate the current cleanup level of 50 parts per million total lead for the surface impoundment closure in terms of the solubility of the lead contaminant onsite. The waste extraction test results from the Brown and Caldwell laboratory analyses collected at points H18NE-7-36 and J12NE-13 indicate a total lead content of 190 and 49 parts per million (ppm) and a soluble lead content of 5.4 and 2.5 ppm respectively. Based on this information combined with a soil pH of 8.7 and 3.5, respectively, the Department recommends the current cleanup level of 50 ppm lead be changed to a maximum cleanup level of 200 ppm Total Threshold Limit Concentration (TTLC) for lead. Due to the slightly alkaline soil conditions onsite, there will be no need for the application of agricultural limestone prior to backfilling as discussed in the September 10, 1985 meeting.

The new cleanup level will also apply to those areas outside the designated surface impoundment closure site. (See map) Soil removal from the areas east and west of the closure site must resume upon completion of closure requirements.

As specified in the June 28, 1985 letter from the Department to the O'Brien Corporation closure requirements must be completed by submitting post-cleanup sample results, closure cost estimates, and two certifications signed by an independent registered engineer and the owner or operator of the facility verifying that closure was done in accordance with the approved Plan of Correction. Upon receipt of this information the Department will issue a 30-day public notice for the pond closure.

The O'Brien Corporation must submit to the Department and the Regional Water Quality Control Board a Post-Closure Plan outlining a groundwater monitoring program for the pond area and financial assurance statement providing funds for the life of the monitoring program. Upon approval from the agencies involved the Post-Closure Plan can be public noticed.

Once all public concerns have been addressed, the O'Brien Corporation can proceed with the construction of secondary containment as proposed in the January 18, 1985 "Proposed Plan of Correction and Closure Plan" after providing the Department with the following information:

- 1) the design specifications and location of the planned sump;
- 2) the method for removal of liquids and solids which accumulate in the sump; and
- 3) the analytical parameter to be used for characterization of the accumulated liquids and solids.

The secondary containment system will be required for the waste water tanks as specified in the Interim Status Document, Section II, Part 2(a) until such time that the O'Brien Corporation provides the Department with documentation that liquids going into the tanks are nonhazardous by the Department's criteria.

If you have an any questions concerning these matters, please contact Patti Barni at (415) 540-2747.

Sincerely,

Dwight R. Hoenig, Chief

Toxic Substances Control Division North Coast California Section

cc: Mike Burdine - O'Brien Corp. Melita Elmore - RWQCB

Ben Bennedsen - Woodward-Clyde

PB:rvh

# DEPARTMENT OF HEALTH SERVICES 1151 EEFFELEY WAY 1101-161 CA 94704



Mr. E. Daly
The O'Brien Corporation
450 East Grand Avenue
South San Francisco, CA 94080

August 29, 1985

SUBJECT: Additional Sampling Requirements

Dear Mr. Daly:

On August 15, 1985 a meeting was held at the Fuller O'Brien Corporation in response to the discovery of the buried drums at the southeast corner of the pond closure cleanup site. As a result of this meeting the following samples will be collected at the sites specified on the attached map.

- Buried drum site: According to the information you provided the Department the drums located at this site are at least 40 years old and were put in place by the previous owners. 110-gallon drums are stacked two tier high and are covered with a cement coating. DOHS will require four soil samples from the pit containing the exposed drums. The locations and depths are as follows: Sample number 1 is a subsurface soil sample collected from under the largest puddle at the east end of the pit; sample number 2 is a subsurface soil sample collected at a depth of 6 to 12 inches at the northern end of the pit; and sample numbers 3 and 4 are surface and subsurface samples collected at the western end of the pit in the vicinity of the puddled red liquid. All soil samples are to be analyzed by EPA methods 8240 (volatile organics) and 8250 (base/neutral and acid extractable organics, phenols, and polynuclear aromatic hydrocarbons), and for priority metals. The RWQCB requested the analysis of one water sample for organics to be collected from the puddled liquid at the east end of the pit.
- 2. Pit west of the exposed drums: DOHS requires a surface and subsurface soil to be collected from the pit west of the exposed drum site. The west pit walls are lined with exposed broken clay pots and bricks. The soils are to be analyzed for heavy metals and by EPA methods 8240 and 8250. A water sample is to be collected from the puddled liquids in the west pit and analyzed for organics as specified by the RWQCB.
- 3. Offsite sampling: As indicated on the attached map, DOHS will require offsite sampling at the designated points south of the Fuller O'Brien fence. Surface and subsurface samples at a depth of 18 to 24 inches are to be collected and analyzed for

August 29, 1985

-2-

Mr. E. Daly

heavy metals. Water samples maybe required at a future date.

If you have any questions, please contact Patti Barni at (415)540-2747.

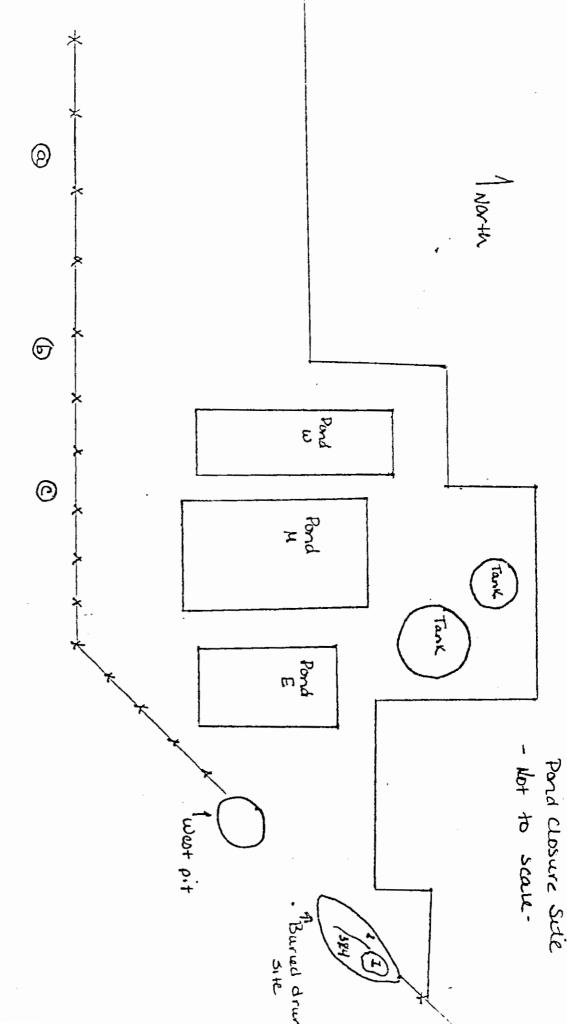
Sincerely,

Dwight R. Hoenig, Chief

North Coast/California Section Toxic Substances Control Division

Enclosure

cc: Melita Elmore - RWQCB, Oakland
Mike Burdine - O'Brien Corporation
Ben Bennedsen - Woodward-Clyde



Fuller O'Brein

offsite sampling: surface and subsurface samply at points a, b, and c south of the Fuller O'Brien tence.

جمعي:

Buried drum sample location: #1 = subsurface beneath large pudelt #2: subsurface on northern edge of #3 mid #4: surface and subsurface at puddled red havid charmed.

West Pit:

surface and subsurface san